Rocky Flats Environmental Technology Site

MAN-076-FDPM
REVISION 3

FACILITY DISPOSITION Program Manual

APPROVED BY: /s/ / Jeff Stevens /

Decommissioning Program Manager **Print Name** **Date**
Kaiser-Hill Company, L.L.C.

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1 INTRODUCTION

The Facility Disposition Program Manual (FDPM or Manual) establishes the requirements for planning and executing work for the disposition of facilities at the Rocky Flats Environmental Technology Site (RFETS or Site) in accordance with the Rocky Flats Cleanup Agreement (RFCA) and the Decommissioning Program Plan (DPP). Requirements are based on regulations, agency agreements, consent orders, and Site infrastructure requirements.

This Manual also provides guidance and requirements to Project Managers (PMs) for identifying and implementing the facility disposition requirements, including Site requirements, and provides implementation tools, e.g., templates, tables, process flow charts, checklists, etc., to aid the PMs in performing their duties. Planning guidance for facility disposition activities can also be located on the RFETS Website under Strategic Planning and Integration.

1.1 APPLICABILITY AND USE

This Manual applies to all Site employees and subcontractors performing or supporting facility disposition work. Any changes, revisions, or exemptions to this manual **SHALL** be approved by the Kaiser-Hill Company, L.L.C. (K-H), Decommissioning Program Manager.

This Manual identifies mandatory elements by using the word "**SHALL.**" Additionally, the manual uses the word "**should**" to indicate a recommendation that is based on standards and good business practices. The word "***may***" is used when permission is granted rather than constituted as a requirement. Facility disposition activities that were initiated before the establishment of this manual **should** obtain written exception from the requirements of this document, as appropriate, from the appropriate PM.

1.2 OVERVIEW

Table 1-1, Section Overview, provides an overview of each of the sections contained in this Manual and their corresponding appendices.

1.3 DEFINITIONS & ACRONYMS

All definitions and acronyms referred to throughout this manual are contained in Appendix H, Glossary. The following definitions, and the definitions provided in Appendix H, Glossary, apply to the facility disposition process at RFETS. The RFETS specific definitions provided in this Manual take precedence over definitions in the Rocky Flats Plant (RFP) Dictionary or other Level 1 Program Manuals.

Consistent with RFCA and the DPP, the FDPM follows the RFCA convention insofar as the term "building" may mean a building, portion thereof, facility, structure, system or component.

Building Stabilization, as used for the facility disposition process at RFETS for deactivation activities in non-SNM buildings, means:

Table 1-1
SECTION OVERVIEW

	Section Contents	Appendices
SECTION 1 INTRODUCTION	• Manual Purpose, Applicability, Section Overview • Responsibilities • Records, References	
SECTION 2 FACILITY DISPOSITION PROCESS	• Overview of Regulatory Framework • Overview of Facility Disposition (High Level Flow Chart) • Overview of Planning Process Phases (All elements, and Key Process Element Descriptions *(Facility Type, Decision Document, Characterization Process, & PMP)* • Overview of Execution Phases for Facility Disposition	
SECTION 3 PROJECT INITIATION AND SCOPING	• Scoping Elements • Establishing the Project Team *(Roles & Responsibilities, Qualifications, Regulatory Interfaces)* • Project Team Kick-off • Scoping Characterization • Joint Scoping Meeting w/LRA • Initial Development of: Scoping PMP, Waste, AB, Contracting, RCRA Permitting, etc., Strategies • Project Files & Administrative Records • Preliminary Options Analysis	Appendix A A-1 Generic Decommissioning Project File Index A-2 Project Deliverables Matrix Appendix B B-1 Type 1 Facility Checklist
SECTION 4 PLANNING & ENGINEERING	• Reconnaissance Level Characterization (RLC) • RLC Plan/Report, Review & Approval Cycles • Options & Feasibility Studies • Update to Strategies & Plans • Engineering Studies & Assessments • Update to PMP • Decision Document Requirements • Authorization Basis • Work Control Documents & Engineering Design Packages • Final PMP • Other Planning Characterizations	Appendix C C-1 Decision Document Template C-2 RSOP for Component Removal, Size Reduction, and Decontamination Activities Checklist
SECTION 5 EXECUTION	• Readiness Determinations • Training Requirements • Physical Work Preparation & Site Preparation • Dismantlement Activities • In-Process Characterization, Final & Validation Surveys • Demolition • Transition to Environment Restoration • Waste Management	Appendix D D-1 Decommissioning/Environmental Restoration Interface Guidelines Appendix E E-1 Daily Report E-2 Progress Photographs
SECTION 6 PROJECT CLOSEOUT	• Project Acceptance & Close-Out Documentation Standards • Project Reporting Standards and Required Reports • Division 1 Specifications • Project Acceptance and Close-Out Tasks and Documentation (Beneficial Occupancy, Project Acceptance & Transfer) • Final Project Closeout Report • Lessons Learned	Appendix F F-1 Partial & Complete Subcontract Close-Out Form F-2 Project Final Closeout Form (FPCO) F-3 Type 1 Facility Closeout Report
SECTION 7 REFERENCES	• References	
SECTION 8 APPENDICES	• Appendices (All above plus Appendix F)	Appendix G G-1 Glossary & Acronyms

These are activities necessary to remove a building from operation and place the building in a safe and stable condition so that the building and its contents are in a condition that eliminates or mitigates hazards and ensures adequate protection to workers, the public and the environment. Activities necessary to achieve and maintain building stabilization may include inventory and removal of hazardous materials from the facilities and immediate areas, such as regulated hazardous chemicals, beryllium, and gas cylinders, roof repairs over critical areas, asbestos abatement and/or encapsulation, and repack of existing waste crates in questionable condition.

Building stabilization is achieved when the facility is in a safe and stable condition while awaiting further disposition.

Note: Building stabilization applies to non-nuclear buildings.

Commercial Process is the process of evaluating the applicable requirements to decommissioning a facility and grading the requirements commensurate with the hazards in the buildings. References are only made to industry standards and regulations. DOE Orders and Site requirements are translated into the scope of work for the decommissioning project.

Consultative Process involves one of the RFCA Parties to meet and confer with another RFCA Party and any appropriate contractors in order to reach agreement among the Parties, to the extent possible, regarding a course of action. The process involves a cooperative approach to problem solving at the staff level. Related consultation includes the responsibility to raise any concerns or suggestions regarding the implementation of RFCA as soon as the concern or suggestion is identified. Consultation means timely participation at the staff or management level, as appropriate, to reach consensus among the regulators and DOE so that there is a clear understanding of the actions or direction to be taken based upon the outcome of the consultative process. Refer to RFCA, Part 7.

Deactivation, as defined in RFCA paragraph 25(y) means:

"... the process of placing a building, portion of a building, structure, system, or component (as used in the rest of this paragraph, "building") in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program in a manner that is protective of workers, the public, and the environment. Actions during deactivation could include the removal of fuel, draining and/or de-energizing of nonessential systems, removal of stored radiological and hazardous materials and related actions. As the bridge between operations and decommissioning, based upon Decommissioning Operations Plans or the Decommissioning Program Plan, deactivation can accomplish operations-like activities such as final process runs, and also decontamination activities aimed at placing the building in a safe and stable condition. Deactivation does not include decontamination necessary for the dismantlement and demolition phase of decommissioning, i.e., removal of contamination remaining in fixed structures and equipment after deactivation. Deactivation does not include removal of contaminated systems, system components, or equipment except for the purpose of accountability of Special Nuclear Material SNM and nuclear safety. It also does not include removal of contamination except as incidental to other deactivation or for the purposes of accountability of SNM and nuclear safety."

Note: Deactivation terminology applies to nuclear buildings.

The following are examples of potential end points for deactivation. Not all end points will apply in all buildings that go through a deactivation process:

- A determination that the probability of a criticality event in the building is considered not credible;

- Removal of all combustibles that are not integral parts of the building;
- Removal of all classified materials;
- A shift in primacy from Atomic Energy Act oversight of the Defense Nuclear Facility Safety Board (DNFSB) to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulation through RFCA by the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE).

Activities such as waste chemical removal, disposition of excess property, chemical hazards reduction and placement of Resource Conservation and Recovery Act (RCRA) units into RCRA stable condition, or their closure, may occur during either deactivation or decommissioning. The DPP has been clarified to allow the removal of fixed equipment and systems in buildings undergoing the disposition process. Fixed equipment and systems means those items that are attached to the floors, walls, or ceiling of a building, but are not connected to building systems that could provide a pathway for contaminants to reach the environment. Fixed equipment that is connected to building systems may be removed in accordance with the DPP with agreement from DOE and the LRA. The DPP Section 1.1.5 outlines the requirements for removal of certain fixed equipment or systems.

Decommissioning, as defined in RFCA paragraph 25(z) means:

"... for those buildings, portions of buildings, structures, systems or components (as used in the rest of this paragraph, "building") in which deactivation occurs, all activities that occur after the deactivation. It includes surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. For those buildings in which no deactivation occurs, the term includes characterization as described in Attachment 9, surveillance, maintenance, decontamination and/or dismantlement for the purpose of retiring the building from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted use or, if unrestricted use is not feasible, restricted use of the buildings."

Disposition, as defined in RFCA Attachment 9, means:

"... the sequence of activities required to take a building/facility from its existing condition to its final disposition."

The term building/facility disposition is used to describe the entire building/facility disposition process. It includes removal of property, waste, chemicals, Special Nuclear Material (SNM), and holdup; stripout of fixed equipment; deactivation/building stabilization; decontamination; demolition; waste removal or emplacement; and the characterization and planning necessary to support any or all of the above. Building/facility disposition is distinguished from landlord activities in that landlord activities are those that occur in order to keep a building in its current, operating condition. The primary planning document for the facility disposition process is the Project Management Plan (PMP). Project Baseline Documents (PBDs) are the documents by which Department of Energy (DOE) approves the annual work scope and budget that is derived from the PMP.

NOTE: SNM and residue elimination activities specifically covered elsewhere are considered part of the facility disposition process; however, these activities do not require a RFCA decision document.

Mothballing, as defined in section 3.3.4 of the DPP, means:

". . . placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning, and fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating."

The DPP requires that a Reconnaissance Level Characterization Report (RLCR) be submitted to the Lead Regulatory Agency (LRA) before mothballing a facility. In addition, if DOE chooses to "mothball" a facility, DOE will submit a hazards analysis of the facility specific conditions for the mothballed period, meet with the LRA to discuss any potential hazards or releases to the environment which might occur during the mothball period, devise actions to mitigate potential releases in collaboration with the LRA and propose adequate monitoring methods to monitor any release. The hazard analysis conducted as part of the authorization basis assessment would be sufficient for the analysis required for mothballing.

Notification. Once an RSOP is approved by the regulatory agencies, DOE may implement it for a specific project by notifying the LRA prior to implementation. Content requirements are specified in the individual RSOPs. A notification letter to implement an RSOP may be used throughout the duration of the Rocky Flats Closure Project. The LRA has 14 days to review the notification letter and provide feedback. If no feedback is received within 14 days that documents the LRA exceptions to the notification letter, the project will proceed.

1.4 RESPONSIBILITIES

The following section provides a summary of the primary responsibilities for implementation and execution of facility disposition projects. These responsibilities are not meant to be all encompassing.

1.4.1 Manager, Decommissioning Program

The Decommissioning Program Manager is the primary point of contact for the planning and preparation activities associated with facility disposition including 2005 schedule coordination, Strategic Planning and Integration interface, and characterization activity interface. The Decommissioning Program Manager has the following responsibilities:

- Updates this Manual and assures Manual compliance with RFCA and DPP requirements.
- Implements the program requirements for the Site's facility disposition process.
- Coordinates decommissioning interface between Projects.
- Develops and maintains Site wide processes for the facility disposition effort (e.g., characterization protocol, decontamination procedures, decontamination processes, decommissioning RSOPs, etc).
- Implements Site processes needed for facility disposition, e.g., GSA and HUD administrative requirements.
- Provides single point of contact for the facility disposition document reviews and establishes facility disposition document consistency for the Site.
- Assigns lead reviewers and technical writers to review facility disposition project documents, including Project Management Plans (PMPs) and RSOP notification letters.
- Maintains contact with regulatory agencies, DOE and other stakeholders (e.g., reports on decommissioning progress), and coordinates resolution of Site-wide decommissioning issues.

1.4.2 Kaiser-Hill Project Managers/Directors

The K-H Project Manager/Director (referred to within as PM) has ultimate responsibility, accountability, and authority in any matter involving their specific assigned disposition project. The K-H Project Manager/Director has the following responsibilities:

- Responsible for managing their assigned project within the authorized funding and approved work scope and schedule.
- Integrates activities of subcontractors and Site personnel, and interfaces with regulatory agencies, DOE, and other stakeholders as appropriate.
- Ensures that a project-specific administrative record file is created and maintained throughout the project.
- Ensures compliance with all regulatory and Site infrastructure requirements.
- Reviews, concurs, implements and maintains all major planning documents, RFCA Decision Documents, RSOP notification letters, PMP, Authorization Basis (AB), etc., associated with the project.
- Requests assistance from facility and Site Safety Management Programs (SMPs) to oversee certain aspects of the work.
- Ensures that project teams, when required, are made up of the properly qualified safety personnel and subject matter experts.
- Implements the decisions made by the use of this Manual in the execution of planning, analysis, procedure writing, work package generation, and development of decision documents.
- Ensures that the subcontractor executes the work within the assigned scope of work, on time, and within budget.

1.4.3 Subject Matter Experts (SMEs)

SMEs support development and implementation of facility disposition documents in accordance with the requirements in this Manual, the *RFETS Decontamination and Decommissioning Characterization Protocol* (DDCP), environmental protection and compliance programs, and the appropriate SMPs. SMEs also provide input into the work document planning and development process to develop a product that will implement the elements of this Manual, while also ensuring efficiency and workability are incorporated.

1.4.4 All Employees

All employees are responsible for following the requirements of this Manual and identifying and reporting Site health, safety, quality, and environmental concerns or deficiencies as a routine element of their normal activities.

1.5 RECORDS

Records generated by this Manual are considered QA records. The PM maintains and dispositions QA records in accordance with 1-V41-RM-001, *Records Management Guidance for Records Sources.*

Records identified as Administrative Records (ARs) will be maintained in accordance with 1-F78-ER-ARP-001, *CERCLA Administrative Records Program* to be placed in the project specific administrative record file.

See also Section 3, Scoping, Section 7, Project Closeout, and Appendix A for more specific information on project files and Administrative Records.

2 FACILITY DISPOSITION PROCESS

The purpose of this Section is to provide the user with an overview of the following subjects:

- The regulatory framework for facility disposition, e.g., the RFCA and the DPP requirements;
- Programmatic requirements and guidance, based on RFCA and DPP, to ensure a consistent and standardized approach to performing facility disposition activities across the Site;
- The overall facility disposition process, including flowcharts, and each of the process elements, referencing where in the Manual further detailed descriptions can be found;
- Key or cross-cutting topics of the facility disposition planning process not explicitly covered in the Sections 3-7 discussion of project phases, including:
  - The PMP
  - Facility characterization
  - Worker and public safety and environmental values
  - Quality assurance/quality control
  - Decommissioning work breakdown structure and project control
  - Deactivation activities and process
  - Decommissioning activities
  - Environmental restoration activities
  - Transferring landlord responsibilities if it is determined that such a change is required

2.1 REGULATORY FRAMEWORK

On July 19, 1996, the DOE, EPA and CDPHE executed the RFCA. RFCA is the Federal Facility Agreement pursuant to the CERCLA and Consent Order under the RCRA and Colorado Hazardous Waste Act (CHWA). RFCA replaces the Interagency Agreement between these parties that had been in place since 1991 and regulates the Site cleanup under the three statutes.

The Rocky Flats Vision (Vision), RFCA Appendix 9, guides all activities at the Site. Among other things, the Vision for Rocky Flats is to achieve accelerated cleanup and closure of the Site in a safe, environmentally protective manner, and in compliance with applicable state and federal environmental laws and agency agreements. All work done at the Site to achieve the Vision is scheduled through a unified planning process that is captured in the CPB, as described in RFCA ¶¶s 136 to 141.

RFCA coordinates DOE's response obligations under CERCLA, closure obligations under CHWA and corrective action obligations under CHWA and RCRA, as well as activities not regulated under the Federal Facility Compliance Act (FFCA) for treatment of mixed wastes generated by RFCA-regulated activities.

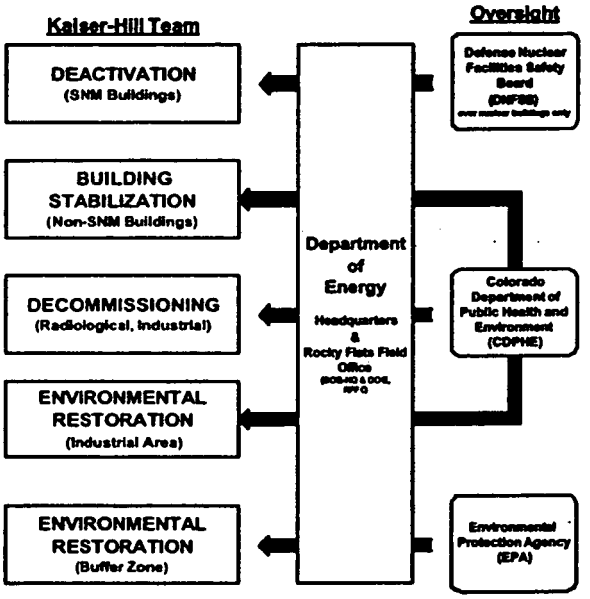
As required by RFCA, the DPP establishes the regulatory framework to be used for the disposition of facilities at the RFETS. Decommissioning of contaminated facilities will not start without the approval of a RFCA decision document. The DPP describes the screening process for determining what activities require a RFCA decision document and establishes the process for obtaining regulatory approval to start decommissioning activities.

Many activities do not require RFCA decision documents or RFCA decisions. These activities include, but are not limited to, real and personal property disposition under federal property management requirements, relocation of mission components to other DOE sites, RCRA closures, day-to-day operation

of the Site to provide protection to the worker, public and the environment, and ongoing hazard reduction efforts.

Figure 2-1 depicts the various regulatory oversight authorities and decision-makers for the Site. This figure is not intended to be all-inclusive, but rather to provide a simplified view of the primary or LRA for each life-cycle phase of the Sites' closure projects. The term LRA is used in this Manual to define the regulatory agency that is the assigned approval authority. The LRA functions as the primary communications and correspondence regulatory point of contact with DOE and the K-H Project Manager. The Project Manager also interfaces with the Support Regulatory Agency (SRA) and provides documents to the SRA for review, as needed. The LRA coordinates technical reviews with the SRA and consolidates comments assuring technical and regulatory consistency and completeness.

Figure 2-1



2.1.1 Facility Classification Type

For planning purposes, each RFETS facility has been preliminarily screened by K-H into one of three types: Type 1, Type 2, or Type 3. This identification is based on the differing levels of contamination (radioactive and non-radioactive) known or believed to exist within the facility. Each facility "Type" has its own degree of regulation via RFCA and the DPP. The final decision on the facility type is determined by RFFO after the RLCR is completed, and will be discussed during the Joint Scoping Meeting (See Section 3) held between DOE and the LRA. The type will be finalized after the submittal and subsequent review and concurrence of RLCR (See Section 4) by the LRA.

Excerpted from Section 2.2 of the Decommissioning Program Plan

Type 1 ***Buildings free of contamination***

"Free of contamination" means that the following conditions have been met:

- Hazardous wastes, if any, generated and/or stored in the facility have been previously removed in accordance with CHWA and RCRA requirements and any RCRA units have been closed or, if partially closed, the parts of the unit within the facility have been certified as being clean closed; (It will be insufficient to have RCRA units simply in a RCRA stable configuration.); AND
- Routine surveys for radiological contamination performed pursuant to the RFETS radiological protection program show the building is not contaminated; AND
- Surveys, if required, for hazardous substance contamination show the building is not contaminated, AND
- If any hazardous substances including polychlorinated biphenyls (PCBs) or asbestos are present, they are an integral part of the building's structural, lighting, heating, electrical, insulation or decorative materials. As such, they are not "contamination."

Since the presence or absence of physical or safety hazards, while important to the Site in terms of how to proceed with a building's disposition, is not a determinant of whether it will be regulated pursuant to RFCA, DOE will not consider such hazards in categorizing a building as Type 1.

Type 2 ***Buildings without significant contamination or hazards, but in need of decontamination***

Type 2 buildings contain some radiological contamination or hazardous substance contamination. The extent of the contamination is such that routine methods of decontamination should suffice and only a moderate potential exists for environmental releases during decommissioning. Some buildings in this category, e.g., 865, 886 and 991, are now undergoing, or will undergo building stabilization in certain areas prior to decommissioning. The mere fact that building stabilization will occur does not push a building into the Type 3 category. Most buildings where industrial operations occurred that used hazardous substances or radioactive materials or both will fall into this category.

Type 3 ***Buildings with significant contamination and/or hazards***

Type 3 buildings contain extensive radiological contamination, usually as a result of plutonium processing operations or accidents. Contamination may exist in gloveboxes, ventilation systems, or the building structure. Site personnel expect those buildings that were used for plutonium component production, along with the major support buildings for such production, will have significant contamination, and are therefore expected to be classified as Type 3. These buildings include:

- 371/374
- 559
- 771/774
- 707
- 776/777

2.1.2 Project Generated RFCA Decision Documents

Generally, RFCA Decision Document is in place and LRA approved before decommissioning work activities can begin. The type of document may be dependent on the facility's type. In accordance with RFCA Part 7, all parties have agreed to participate in the consultative process to reach consensus on the scope and content of the RFCA Decision Document, including any required changes that may be proposed during the course of the project. The DPP, Section 1.1.5, allows for some decommissioning

activities before a decision document or characterization is conducted. This decommissioning is conducted in consultation with DOE and CDPHE.

Once a facility's type is concurred with by the LRA, it ***does not*** change unless discovery of unknown or additional contaminants. A consultative process is used to determine if the facility type needs to be placed in a higher classification via the RFCA and DPP. A Type 3 building is not down graded to a Type 1 or 2 as it is progressively decontaminated.

The five types of Decision Documents that have been established for decommissioning activities are discussed further in Section 4 and listed below:

- PAM, used for activities less than 6 months in duration
- IM/IRA, used for activities longer than 6 months in duration
- DOP, generally used only for Type 3 buildings
- RFCA Standard Operating Protocol (RSOP), may be used for repetitive decommissioning activities regardless of the facility type
- The DPP is used as the decision-document for Type 1 facilities.

For **Type 1** facilities, the RLCR is sent to DOE who approves the recommendations in the RLCR and sends the RLCR to the LRA. The results of the characterization provide the LRA with sufficient knowledge of the hazards and contamination in the facility for them to concur that it is a Type 1. In addition, because RLCs for Type 1 facilities meet the requirements for PDSs, Type 1 concurrences indicate that facilities meet the unrestricted release criteria and can be dispositioned accordingly. Development of a RLCR is further discussed in Section 4.

For **Type 2** facilities, the RLCR is sent to DOE who approves the recommendations in the RLCR and sends the RLCR to the LRA. The LRA either concurs or not with the facility type.

> *Note: If DOE, as a RFCA party, disagrees with the LRA decision, then DOE may elect to go into dispute resolution.*

For **Type 3** facilities, the RLCR is sent to DOE who approves the recommendations in the RLCR and sends the RLCR to the LRA. The LRA either concurs or not with the facility type.

> *Note: Additional non-RFCA authorizing documents may also be necessary before decommissioning can commence. These documents include Nuclear Safety AB documents, e.g., Basis of Interim Operations (BIO), Facility Safety Analysis Reports (FSARs), as defined in the Nuclear Safety Manual and as described for Facility Disposition purposes, in Section 4.*

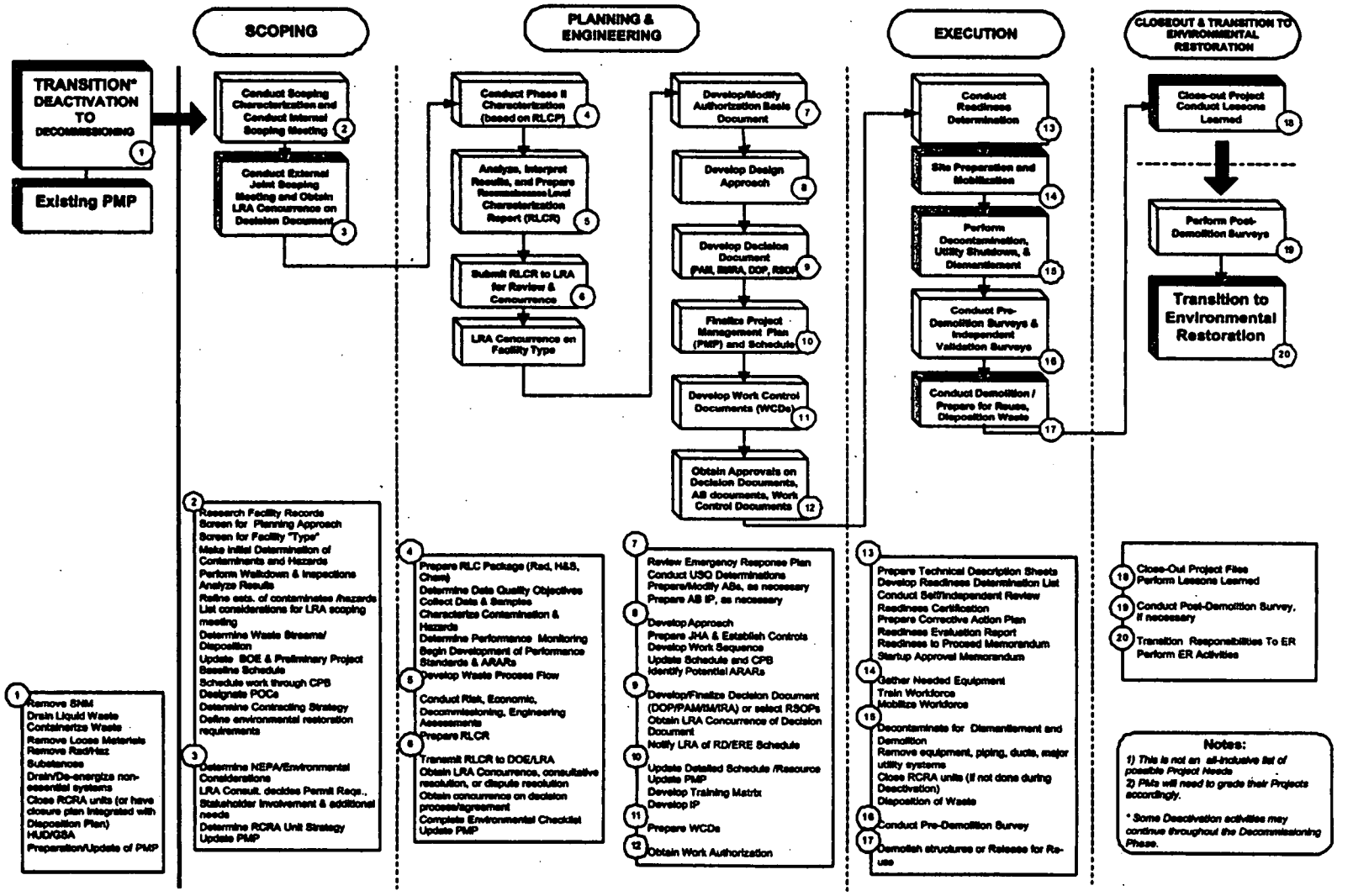
2.2 FACILITY DISPOSITION PLANNING PROCESS

Facility disposition encompasses a wide range of activities ranging from deactivation and decontamination to final demolition or release of the building for reuse. Planning and execution must move toward a well-integrated parallel approach where all of these activities can occur at any time, simultaneously, within the facility, under the appropriate regulatory decision-making framework. Figure 2-2 provides a high-level process flowchart of the facility disposition process. Figure 2-3 provides a more detailed look at some of the essential processes depicted in Figure 2-2.

In order to discuss the activities within the planning and execution of the decommissioning portion of a facility disposition project, it is convenient to define phases within which these activities would nominally be conducted. These phases are discussed briefly below, along with their purpose and the section in which the activities are discussed in detail.

FACILITY DISPOSITION SCHEMATIC

Figure 2-2



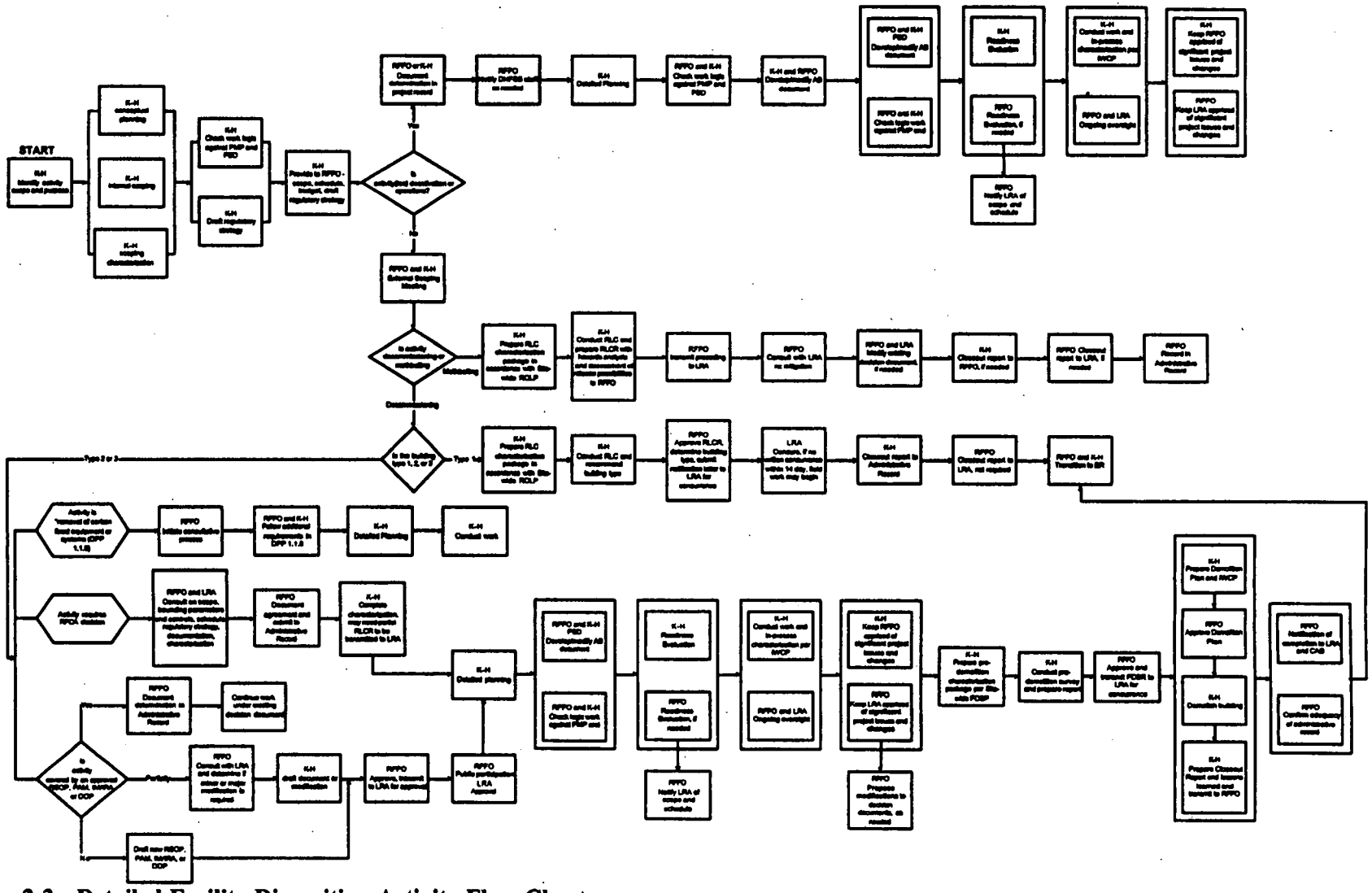


Figure 2-3 - Detailed Facility Disposition Activity Flow Chart

Scoping (Section 3)
The Scoping phase consists of the initial planning effort to define the project approach, scope, cost, and schedule and establish the project team. Before this phase, planning is conducted at the programmatic level, and project parameters (e.g. cost, waste) are based on parametric models. This phase typically occurs in parallel and is coordinated with deactivation and/or building stabilization in the context of the overall facility disposition project.

Planning (Section 4)
This phase includes investigating the initial planning assumptions, defining the execution activities, and performing the activities necessary to begin execution, such as development of procedures, preparing for readiness reviews, and procurement of equipment and services. A principal effort is the characterization of the facility, which establishes the existing conditions, better defines the scope of work, and permits the feasibility of approaches to be determined. The regulatory decision document is also approved. It includes the detailed planning – work package development – which occurs shortly before physical work. A project may have Planning occurring for one area concurrent with physical deactivation in the same area, and mission activities or dismantlement occurring in adjacent areas within the facility.

Project Execution (Section 5)
Project Execution includes the physical dismantlement of internal and external facility equipment, decontamination of the building structure, and the demolition of the facility. It begins with the readiness determination/reviews and concludes with the demolition of the facility and removal of the slab. The environmental restoration activities are integrated with the end of this phase, as applicable.

Project Close-out (Section 6)
The final phase of decommissioning in a facility disposition project, this phase covers the activities necessary to complete project and regulatory closure of the work. Its purpose is to make sure follow-on actions and Site closeout are facilitated.

2.3 CROSS-CUTTING TOPICS IN THE FACILITY DISPOSITION PLANNING PROCESS

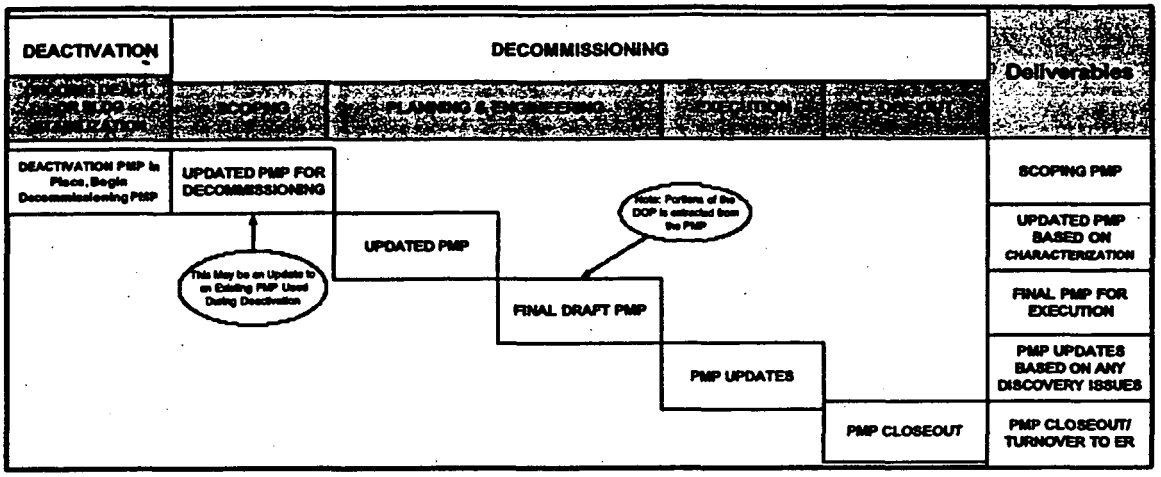
Discussions of key or crosscutting topics of the facility disposition process are provided below. In some cases, the topics are relevant to all phases of decommissioning. In other cases, while external to the decommissioning portion of the project, their interfaces with decommissioning are extremely important to the success of the overall project.

2.3.1 Project Management Plan (PMP)

The PMP is considered a "living" document that is maintained up-to-date throughout the life cycle of the project, as depicted in Figure 2-4. A PMP **SHALL** be prepared for each Project Baseline Description (PBD), and a Site-wide PMP **SHALL** be prepared by Strategic Planning and Integration. Individual buildings may prepare a PMP or work plan to address decommissioning activities, or the information may be included in the PMP for the PBD. The PMP **SHALL** present key information on what the project is (scope), and how much information is required (Planning), and how long it will be performed (Execution). The PMP is graded based on the complexity of the project, contains planning deliverables, and summarizes the results of the detailed project development and engineering activities. PMPs are approved by the K-H Project Manager. A copy of the current version of the PMP **should** routinely be provided to the DOE project point of contact for information, and **may** be provided to the LRA, SRA, and

stakeholders for information when requested. The copies are provided to DOE and regulators for information and are not approved by them.

PROJECT MANAGEMENT PLAN (PMP)
Figure 2-4



The Project Deliverables Matrix contained in Appendix A-2 provides a listing of the various plans, documents, and reports, that *may* be necessary for a given project. Project Managers **should** review the matrix and ensure those items that are necessary and appropriate for their project are completed prior to and during each planning phase and then during execution. The PMP **should** be updated during each phase of the project, including Execution. At project end, the PMP **should** be closed out and placed in the project file.

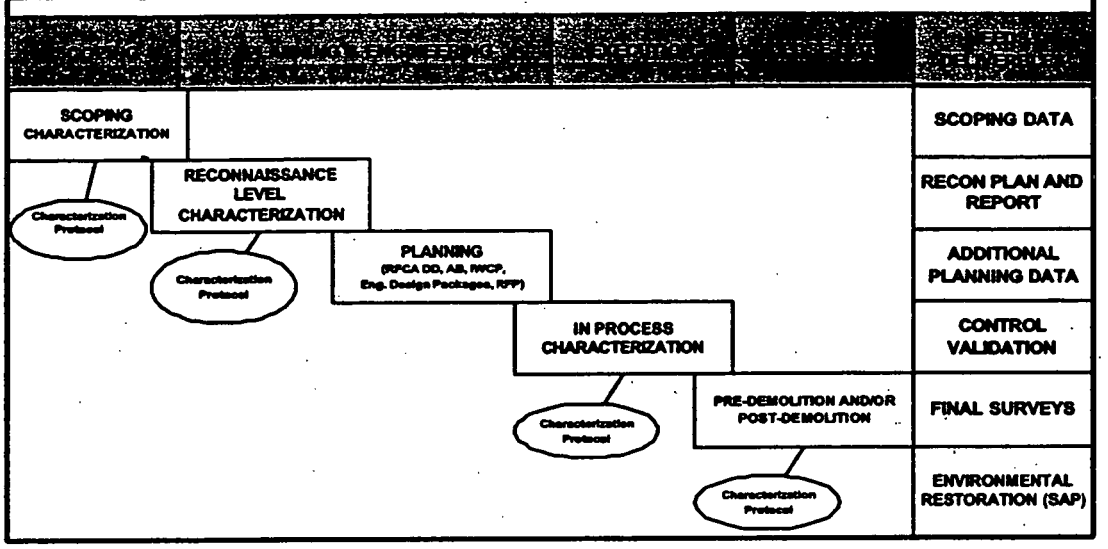
An essential element in the decommissioning project planning process is an estimate of the magnitude of project wastes, which identifies hard-to-dispose of wastes; the estimate is incorporated into BEST. Identifying the types and magnitudes of waste allows the Material Stewardship Project to plan their support to the project, such as delivery of waste container, disposal contracts, waste storage prior to disposition, maintaining or closing treatment units, etc.

2.3.2 Facility Characterization

For purposes of facility disposition, characterization is a continual process throughout the disposition of the facility and is accomplished over several phases as depicted in Figure 2-5. Characterization planning and characterization field activities are part of RFCA decommissioning and **SHALL** be preceded by project-specific scoping meetings. Project-specific Environmental Checklists **should** be reviewed to determine if characterization results impact the checklist content, and updated appropriately.

FACILITY DISPOSITION CHARACTERIZATION PROCESS

Figure 2-5



Reconnaissance level characterization (RLC) has two primary purposes. The first is the identification of hazards necessary to enable facility typing. This is accomplished per the Site-wide Reconnaissance Level Characterization Plan (RLCP), including preparation of the RLC Report (RLCR), which contains the results of the characterization. The RLCR provides the basis for the final recommendation to DOE on the facility "type", i.e., Type 1, Type 2, or Type 3. The RLCR is submitted to the LRA for concurrence.

The collection of characterization data required for the RLCR follows the guidance provided in the RLCP. The characterization process described within that document ensures a consistent and systematic approach in obtaining characterization data regarding the physical hazards, radiological hazards, and chemical hazards in the facility. It uses the Data Quality Objective (DQO) process that identifies type, quality and quantity of data needed. The DQO process helps the user to define DQO qualitative and quantitative statements that accomplish the following:

- Clarify technical and quality objectives and decisions to be made,
- Define the appropriate type of data needed to make decisions, and
- Specify tolerable levels of potential decision errors needed to establish a basis for quality and quantity of data.

The second purpose of the RLC is to collect additional data for project planning. Data sources include written documentation, walkdowns, and physical sampling. Data can be used for developing and finalizing the various authorizing work documentation, including presenting controls to protect the worker, the public, and the environment. Examples of additional data elements are engineering and design data, other facility concurrent and ongoing activities, utility systems, and equipment.

DETAILED CHARACTERIZATION ELEMENTS

Scoping Characterization - occurs during the Scoping Phase and includes:

- Collection of all historical documentation regarding the facility mission, operations, and abnormal events (e.g., spills), including agency records
- Current and documented radiological survey reports and Radiological Improvement Reports
- Health and safety routine surveillance reports
- Environmental and waste reports
- Authorization Basis documents (Site SAR, BIOs. FSARs, BFOs, etc)
- Incident reports
- Prior facility resident/operator interviews
- Other informational reports or data, etc.

Reconnaissance Level Characterization – occurs during Planning and includes:

- Identification of radiological hazards, e.g., stored radioactive sources, contaminated areas, SNM, etc.
- Identification of non-radiological hazardous constituents and/or substances, e.g., beryllium, asbestos, PCBs, lead and other heavy metals, etc.
- Identification of physical safety hazards

"In-Process" Characterization – occurs during the Project Execution Phase and includes:

- In-Process surveys for radiological and non-radiological hazardous constituents and/or substances
- Physical hazards, e.g., noise, confined spaces, excessive heights, electrical, etc. necessary for continuing facility disposition activities.

Pre-demolition Survey *("Characterization")* - occurs near the end of the Project Execution Phase and prior to facility demolition and includes:

- *Pre-Demolition Survey*
- Independent Verification/Validation Survey *(Note: DOE will determine if required)*

2.3.3 Worker and Public Safety and Environmental Values

Maintaining a safety awareness culture is enhanced using the philosophy and principles of the Integrated Safety Management System (ISMS). ISMS provides the framework for identifying and mitigating adverse impacts to workers, the public and the environment. It is incumbent on the PM and project team to maintain a focus on these principles during development of work control documents. For example, job hazards will be identified and controlled using a graded approach.

The K-H Team is committed to continued excellence, leadership and stewardship in protecting the environment. Environmental protection is a primary management responsibility, as well as the responsibility of every employee and supplier of services and products to our organization. It is management's responsibility to ensure environmental concerns are built into all project control documents and to integrate environmental information into all levels of project management. The Site Environmental Stewardship program is part of the Site infrastructure and includes environmental management systems and tools to measure and verify compliance and to mitigate impacts to the environment. It is the PM's responsibility to ensure these systems and tools are incorporated as applicable at the project level. For example, the PM will prepare and submit a RFETS Environmental Checklist for each closure activity or group of activities to the Environmental Stewardship program. This checklist will be reviewed by the Environmental Stewardship program, and necessary controls, including environmental monitoring requirements, will be developed based on potential impacts.

2.3.4 Quality Assurance and Quality Control (QA/QC)

The QA/QC standards that apply to the overall facility disposition process are 10 CFR 830.120, *Quality Assurance Requirements*, and DOE Order 414.1, *Quality Assurance*. These standards are the overriding requirements at RFETS and are the basis of the K-H Quality Assurance Program (QAP). The application and implementation of these criteria will be consistent with the graded approach and applied in project specific documents. In practical terms, the graded approach requires selective application of QA/QC requirements and control commensurate with the safety and project objectives.

2.3.5 Waste Management

Waste management for the project is performed in accordance with the PMP, RFCA Decision Document, and Site waste management procedures specifying packaging and handling requirements. It is the PM's responsibility to notify the Material Stewardship Project of the estimated project waste generation, by category (i.e., low level, low level mixed, sanitary, transuranic, transuranic mixed, and hazardous). If, during the in-process characterization or at any time during the execution phase of the project, the estimated waste generation rate changes significantly, the PM will notify the Material Stewardship Project of that change and update the working baseline and BEST.

All wastes will be generated, managed, certified, and dispositioned in accordance with all Site procedures, including, but not limited to:

- Hazardous Waste Requirements Manual 1-10000 HWR
- Transuranic (TRU) Waste Management Manual 1-MAN-008-WM-001
- Low Level Waste Management Plan 94-RWP/EWQA-0014
- Waste Characterization Generations and Packaging, 1-PRO-079-WGI-001
- Transportation Manual
- PCB Management Plan
- Offsite Waste Management Program, 1-MAN-037-OWMP

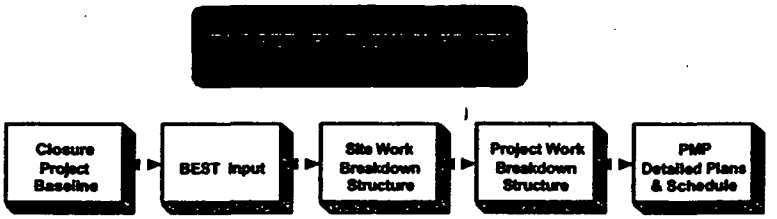
All government property, real or personal, must be accounted for and in some cases *may* require special disposition. The project will follow the requirements in the Property Management Manual (PMM) 1-MAN-009-PMM. The requirements for property disposition are contained in Section 5 of the PMM. Before any property can be removed from a facility in any form, it must be accounted for. In general, property will either be released without restrictions and shipped to PU&D for disposition, shipped from a RFETS contaminated area to another contaminated area in the DOE Complex, or disposed of as waste.

Certain items of personal property in Type II and Type III buildings can be immediately retired (DOE letter AMEI:ERWM:SS:00-03617 from Charles Dan, DOE, to Len Martinez, K-H, Building 776/777 Property Streamlining, October 17, 2000, and interoffice memorandum from Nancy Tuor, K-H, Retirement of Selected Personal Property in Type II and Type III Buildings – NRT-124-00, October 30, 2000). Such items are no longer providing service to the operations of a facility, and have no future mission requirements to the Site. The items are also currently within a radiological controlled area, and are likely to have radiological and/or beryllium contamination, and as such, are destined to become waste and will not be candidates for reuse.

2.3.6 Decommissioning Work Breakdown Structure and Project Control

The project WBS and WBS Dictionary provide the project framework for definition, management and control of the project, and show how the project fits together. The Project WBS is extended from the

relatively generic Site CPB WBS level 5 and level 6 elements to include activities required to disposition the project. The Project WBS **should** be incorporated into the PMP. An overview of the budgetary flow process from the CPB to the WBS is shown below.



Every project has some level of a WBS included in the CPB. The K-H PMs **should** ensure that:

- The WBS and WBS Dictionary are extended beyond the levels included in the Site-wide WBS.
- The WBS Dictionary identifies appropriate activity endpoints, or identifies when the appropriate endpoint will be defined (i.e. after which other project activity is completed).
- The WBS Dictionary includes other programs (including deactivation activities) which are occurring concurrently in the building, or explicitly describes the interfaces between activities of different programs.
- The project uses the facility disposition project schedule template and aligns the project(s) activities with the WBS. The WBS is required to standardize cost collection for facility transition projects.
- The project milestone, cost and schedule data tie to the project WBS.

The following Decommissioning WBS Dictionary or equivalent can be used for all facility disposition projects. The first level of the WBS is for the Site, the second and third levels are for the building, the fourth level is for the major activity (e.g., decommissioning), the fifth level is for the building work set or work area, and the sixth level is for sub-activities. If a facility disposition project contains more than one building, then the WBS **should** be able to separate scope and accrue costs for each separate building.

Decommissioning Work Breakdown Structure (WBS) Dictionary

1.X.X.D.Y.Y.01, Planning and Engineering
As applicable, this element addresses all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs for the Planning and Engineering of decommissioning projects. The scope of this element includes, but is not limited to, activities such as: the preparation of the Decommissioning PMP, DOP, PAM, IM/IRA, RCRA Unit Closure Plan, HASP, preparation of work control documents, project-specific WBS, readiness assessments, Management Reviews, Waste Management Plan, Training Plan, utility relocation design documents, building demolition design documents, equipment removal design documents, design engineering inspection, preparation of required procedures; e.g., QA/QC procedures, RSOPs, preparation and submittal of all permits; e.g., APENs, etc.

1.X.X.D.Y.Y.02, Reconnaissance Level Characterization
As applicable, this element addresses all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs for characterization of decommissioning projects. Under the characterization WBS element, costs shall be collected for Scoping and Reconnaissance Level Characterization only. This element does not cover the characterization associated with In-Process Characterization during the execution of the Decontamination, Dismantlement, and Demolition and Disposal WBS elements. As appropriate, In-Process Characterization costs would be charged to the aforementioned WBS work element it supports. In addition, this element does not cover the characterization costs associated with Pre-Demolition Survey (PDS), Under Building Contamination (UBC), Potential Areas of Concern, (PAC) or IHSS remediation, which are part of ER.

1.X.X.D.Y.Y.03, Dismantlement

As applicable, this element addresses all the task specific direct labor, equipment, materials, supplies, dismantlement hand tools, and the subcontract (A5X) costs for dismantlement of decommissioning projects. The scope of this element includes, but is not limited to, activities such as: site preparation, stripout, removal and size reduction, if required, of miscellaneous process equipment, distributed systems (building lighting/power, heating, water, sewer, etc.), and isolation of the building/structure/etc. from the rest of the plant infrastructure. This element also includes the costs associated with In-Process Characterization, packaging, pre-certification and movement to the nearest RFETS designated pickup point; i.e., building loading dock, etc., of contaminated wastes/materials generated during the overall dismantlement effort. Any additional movement or TSD of contaminated (hazardous and/or radiological) materials, after they have been packaged and staged at the pickup point, for the types of hazardous and/or toxic wastes generated as a result of the overall dismantlement effort are not included in this element. These waste disposal costs are the sole responsibility of the Material Stewardship Project. For reporting purposes, the decommissioning costs of contaminated area gloveboxes, process piping/ductwork, internal tanks, etc. will be reported under the dismantlement WBS element of that particular building or facility. In addition, the acquisition costs of decommissioning required waste containers, e.g., Standard Waste Boxes (SWBs), will be included under this WBS element.

1.X.X.D.Y.Y.04, Decontamination

As applicable, this element addresses all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs for decontamination of decommissioning projects. The scope of this element includes, but is not be limited to, the decontamination of building interior/exterior surfaces, equipment, drains, etc. In addition, it includes the removal of hazardous and toxic substances; e.g., asbestos abatement, lead/lead-based paint and PCB removals, and any associated In-Process Characterization costs. This element also includes the costs associated with packaging, pre-certification and movement to the nearest RFETS designated pickup point; i.e., building loading dock, etc., of contaminated wastes/materials generated during the overall decontamination effort and any associated In-Process Characterization costs. Any additional movement or treatment, storage and disposal (TSD) of contaminated (hazardous and/or radiological) materials, after they have been packaged and staged at the pickup point, for the types of hazardous and/or toxic wastes generated as a result of the overall decontamination effort are not included in this element. These waste disposal costs are the sole responsibility of the Material Stewardship Project.

Pre-certification of waste materials is defined as that degree or amount of waste inspection and certification required, on the part of the specific Decommissioning Project, to ensure that there is a reasonable probability that the packaged wastes will not be returned to the project for additional work. Pre-certification does not involve any costs for the more sophisticated techniques of waste certification such as NDA, headspace sampling, etc. These sophisticated certification techniques are the responsibility of the Material Stewardship Project.

1X.X.D.Y.Y.05, Pre-Demolition Survey

As applicable, this element addresses all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs for the PDS. The PDS element represents a significant unit of work and it is also one of the largest individual unit cost items associated with decommissioning. The PDS is the last decommissioning activity to occur prior to the demolition and subsequent disposal of the debris associated with the facility. The Pre-Demolition Survey Report (PDSR) must be reviewed and approved by the DOE and both federal and state regulatory agencies, e.g., EPA and CDPHE. In essence, the approval of the PDSR means that the regulators concur that the building/facility has been dismantled and decontaminated to meet all appropriate and relevant standards and requirements; and, demolition and disposal of the structure/facility can proceed as planned. Also included in this WBS element are costs required for the independent verification, as necessary, of the PDSR results and conclusions and costs associated with closeout of the project, i.e., Project Closeout Report.

1.X.X.D.D.Y.Y.06, Demolition and Disposal

As applicable, this element covers all task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs for the demolition and disposal of clean rubble and debris of decommissioning projects. The scope of this element includes, but is not limited to, activities such as the demolition and disposal of the roof, non-structural and structural components, floor slabs, foundations, connecting structures (tunnels, breezeways, overhead walkways, etc.) of the building/structure undergoing demolition and any associated In-Process Characterization costs.

Additionally, for ease of access for future RFCA activities, this element could, (if applicable), include the excavation of surface contaminated soil, back filling, grading and revegetation, as appropriate. This element also includes the costs associated with packaging, pre-certification and movement to the nearest RFETS designated pickup point; i.e., building loading dock, etc., of contaminated wastes/materials generated during the overall demolition and disposal effort. Any additional movement or TSD of contaminated (hazardous and/or radiological) materials, after they have been packaged and staged at the pickup point, for the types of hazardous and/or toxic wastes generated as a result of the overall demolition and disposal effort are not included in this element. In addition, transportation and disposal costs of the demolition rubble at the nearest RFETS approved sanitary landfill are not included. These waste disposal costs are the sole responsibility of the Material Stewardship Project.

1.X.X.E.Y.Y.01 - 05, Support Services

As applicable, this element addresses all the task specific direct labor, equipment, materials, supplies and subcontract (A5X) costs for support services for decommissioning projects. The scope of this element includes, but is not limited to, support services such as: training, procurement and contract administration, security and fire protection, QA/QC, waste inspection and certification, transportation and equipment, radiological operations and engineering, Radiation Control Technician (RCT) support coordination and management, medical and health, safety and industrial hygiene, shipping/receiving and warehousing, legal, regulatory interface, laundry, analytical laboratory, toxic and hazardous material handling, utilities, excess property, telecommunications and information resources, finance and administration, planning and integration, and other support services yet to be identified. This element does not cover any RCT direct labor costs associated with the execution of the decommissioning WBS elements, e.g., Decontamination.

The scope of work to accomplish facility disposition can be broken down into discrete worksets. Although there is no requirement to break the work into "worksets" (typically identified in current project documentation as "sets"), it is recommended for facility disposition projects. These sets combine all required activities for completion of facility disposition. Segregation of the sets into deactivation and decommissioning categories provides for differentiation between regulatory requirements and the work flow process. All sets **should** have specific endpoints or workset boundaries that define work completion. The work sets can be further broken down into work completed by steelworkers and work completed by building trades. This separation of work scope helps expedite the work by further defining the work activities and simplifies contracting and cost tracking.

Establishing specific requirements for project controls and reports ensures continuity, integration and consistency in communicating and documenting the current status and progress of projects. Individual reporting requirements and control criteria are established and defined within the PMP on a graded approach by each project. Project controls and reports are intended to facilitate the following:

- Early identification of potentially damaging trends and occurrences.
- Minimization of management time necessary for detailed review.
- Uncomplicated presentation of relevant information.
- Clear representation of problem significance and required actions.
- Focus on relevant issues.
- Reasonable cost of data acquisition and reporting through the utilization of available project information supported by common commercial PC hardware and software.

All formal reports documented for facility disposition projects **should** include the following basic information: official project title as it appears on the authorizing document; project WBS identification number; report date that report information is based on; and, the date the report was printed. In addition to containing the above basic information and using a graded approach, facility disposition project schedules **should** clearly indicate all scheduled activities, forecasted completion of the scheduled activities, a "Time Now" line, and the critical path activities. As applicable, all project internal, performance measure, and RFCA milestones that fall within the span of the schedule **should** also be

clearly indicated on the schedule. Project controls and reports are detailed on the P&I webpage on the Site intranet.

2.3.7 Deactivation and Building Stabilization

Deactivation and building stabilization activities transition the facility from operations to decommissioning meeting applicable safeguards, hazardous category or other completion criteria. Specific deactivation activities ***may*** include: work control document development, removal of hazardous and non-hazardous materials (e.g., hazardous chemicals, beryllium and gas cylinders), SNM holdup removal, and emptying storage areas to reduce fire loading. RCRA unit closures ***may*** be completed or may be placed in a RCRA stable condition. An economic disposition determination is made for unneeded property.

Deactivation and building stabilization activities reduce the potential liability and risks posed by excess contaminated equipment, RCRA issues, and general hazards. Deactivation also results in additional baseline cost reductions by eliminating or further reducing the surveillance and maintenance activities currently required. Other activities ***may*** include the shipping of materials and waste to further deactivation within these facilities. It also ***may*** include removal of contaminated tooling that is easily removed and removal of clean equipment, tanks and gloveboxes. The deactivation process is controlled by four elements: characterization; operations; deactivation scope; and deactivation planning.

1. Characterization – Requirements for characterization of deactivation activities are satisfied by the ISM process used during the development of work control documents for the deactivation activities.
2. Operations – Operational activities do not support the Landlord functions. An example of an operational activity is the residue processing in the plutonium facilities or the computer facility in Building 881. In order to plan the facility disposition work, it is necessary to establish the end state for the operational activities. The end state ***may*** involve the following activities:
    - Relocation of personnel
    - Removal of excess chemicals
    - SNM holdup disposition
    - Waste removal
    - Classified property/material disposition
    - Removal of liquids/oils from equipment
    - Government property disposition
    - Disposition of records
    - Removal of hazardous and non-hazardous materials
3. Deactivation Scope – Deactivation scope encompasses the end state for deactivation and the starting point for decommissioning. The deactivation activity scope **should** be properly planned and estimated to ensure scope between deactivation and decommissioning is not missed or duplicated. Deactivation endpoints ***may*** be appropriate for facility disposition projects. These endpoints would define the change in regulatory structure. When decommissioning starts, the work falls under RFCA. Deactivation activities are not governed by RFCA.

    End point development is an iterative process. Most end point decisions **should** be developed during the early planning stages. However, some will have to be modified as deactivation proceeds. The end points could contain the following minimum information:
    - A brief description of components (equipment, gloveboxes, piping, etc.) by room, system or by work sets.
    - The components grouped by type (gloveboxes with lathes, gloveboxes with holdup, clean gloveboxes, etc.).

- Waste information (i.e. waste left, containers, etc.)
- An end state **should** be described for each component type. For example: glovebox with a lathe and SNM holdup – accessible holdup in the glovebox will be removed and packaged. The exterior surfaces of the lathe will be clean. The lathe will remain installed. Miscellaneous materials will be removed. The interior of the glovebox will be wiped down. All hazardous materials will be removed. The lead will remain on the exterior of the glovebox. Zone 1 ventilation to the glovebox will be operational. Oils will be removed from the lathe. All liquids will be removed from the box

4. Deactivation Planning – Deactivation planning is documented in a PMP.

2.3.8 Mothballing

There may be situations where there is no longer a mission for a building, and it is not planned for the building to be decommissioned for several years. When this occurs, it may be cost effective to mothball the facility. The term mothball, also called cold closure, is defined as placing a building in a condition where it is no longer actively occupied. Ventilation, heating and air conditioning (HVAC), fire detection and protection systems may be turned off. Sump pumps to remove groundwater infiltration may be operating.

It may be necessary to conduct an economic analysis to determine that if the additional cost to conduct the activities necessary to meet the requirements for the building to be placed into mothball status is less than the savings from the reduction in landlord cost.

In accordance with the DPP, Section 3.3.4, a RLCR will be submitted to the LRA prior to mothballing or prior to beginning decommissioning. In addition, whenever DOE chooses to mothball a facility, DOE will submit to the LRA a hazard analysis of the facility-specific conditions for the mothballed period, meet with the LRA to discuss any potential hazards or releases to the environment that might occur during the mothball period, devise actions to mitigate potential releases in collaboration with the LRA, and propose adequate monitoring methods to monitor any release. Any modification to work previously approved in a decision document would be processed in accordance with RFCA, Part 10, Changes to Work.

2.3.9 Decommissioning Activities

Decommissioning ***may*** begin either in an entire building or in a part of a building. In non-nuclear facilities, decommissioning ***may*** begin as soon as the building's mission is at an end. In some buildings, decommissioning ***may*** run concurrently with deactivation and/or operations, or after deactivation and operation activities are completed. Some activities described in Planning ***may*** occur either during the deactivation or decommissioning phase.

The following list provides examples of decommissioning activities that help delineate the portion of the disposition continuum that is regulated as decommissioning under RFCA and covered by a RFCA Decision Document. (See Section 5 and Appendix D for details regarding RFCA Decision Documents) The sequence of execution of these activities is dependent upon project-specific needs and requirements.

DECOMMISSIONING ACTIVITIES

EQUIPMENT DISMANTLEMENT

- Characterization of hazards, contaminants, or process systems requiring decontamination and strip-out
- Remove or size reduce equipment, piping, ducts, hoods, gloveboxes, and major electrical components (e.g., strip out)
- Remove process vessels
- Remove glovebox off-gas and ventilation ducting legs
- Remove Zone I HVAC system, and ensure ambient air monitoring is in place
- Remove process pumps
- Collect and disposition remainder of files
- Remove hot spots and hazardous substances

DECONTAMINATION (FACILITY/ACTIVITY/EQUIPMENT)

- Decontamination in preparation for release for reuse or dismantlement
- Remove hazardous and radioactive contamination to minimize hazardous/radioactive material dispersion during demolition and minimize high cost waste
- Remove radioactive hot spots and hazardous substances
- Remove non-load bearing walls to minimize high cost waste
- Waste minimization activities associated with decommissioning, e.g., segregation of sanitary and non-sanitary wastes
- Remove remaining asbestos, lead, mercury, etc.

UTILITY SYSTEM SHUTDOWN

- Removal or size reduction of utility systems
- Isolate utility systems to the facility, e.g., steam, water, sewer, fire, diesel generators, UPS, and grounding/lightning protection, pressurized air, liquid effluent discharges, inert systems (N_2, Ar), and O_2 analyzers
- Deactivate HVAC, criticality, and building chemical/gas support systems
- Remove remaining HEPA filters
- Remove/reconfigure electrical switch gear
- Remove remaining operational system that supported previous phases
- Remove accumulated waste and remaining office furniture

FACILITY DEMOLITION

- Final radiological and non-radiological surveys of the physical structure(s), (e.g., Pre and Post Demolition Surveys)
- Demolish physical structure
- Monitor for releases during building demolition *(Note: This may also be done by ER)*
- Disposal of rubble/wastes

2.3.10 Environmental Restoration (ER) Activities

Decommissioning dependent ER activities **should** be integrated with the decommissioning effort to enhance cost effectiveness, schedule efficiency and health and safety. In buildings where under building contamination (UBC) exists, characterization of the UBC **should** begin in the deactivation phase or early during the decommissioning planning phases. It will be necessary to build activities into building schedules that will allow the ER organization to obtain UBC samples by boring through the floor and extracting soil cores.

Early in the planning stages, it will be necessary to determine how much of the underground structure will be removed during decommissioning and what will be removed by ER. In general, decommissioning will include the removal of the whole structure, including slabs and footings, down to three feet below the final proposed grade. If contamination is found below that depth, a plan will be developed between the decommissioning and ER organizations as to when the other structural material will be removed.

Prior to the initiation of decommissioning activities, baseline conditions of surface water, groundwater, air and ecology **should** be established. Monitoring ***may*** be required to fill data gaps. This effort **should** be coordinated with Environmental Systems and Stewardship. To establish good baseline conditions, this effort **should** occur very early in the decommissioning scoping phase.

Whenever possible, the subcontractor performing building decommissioning will perform the ER remediation. This strategy will reduce mobilization and demobilization time and costs, reduce procurement time, and streamline technical processes. The knowledge gained through decommissioning and lessons learned will contribute to accelerated remediation. The following list provides examples of environmental restoration or remediation activities.

SITE REMEDIATION EXAMPLES

- Monitor site for any environmental impacts
- Cap, cover, or otherwise stabilize building slab
- Core sampling of the building/facility for Environmental Restoration
- Disposition of concrete and soils

  Note: Core sampling for establishing a baseline may need to be started prior to demolition.

3 PROJECT INITIATION AND SCOPING

The purpose of this section is to present the requirements and guidance for performing activities in the project initiation and scoping phase of the project. The objective of this phase is to initiate the project and to get agreement on a defined scope of work for the project from DOE and the LRA.

3.1 OVERVIEW

Scoping refers to the process of defining or providing a comprehensive description of the project to be performed. The scope of work refers to the project or activity baseline that defines technical objectives and general approaches in terms of design, execution, and performance requirements, criteria, and characteristics derived from what the project is intended to accomplish.

Project initiation and scoping is the first phase in the facility disposition process. The key steps in this phase involve initiating the project, establishing the project team and records system, conducting the scoping characterization, defining the project scope, preparing or updating the PMP, and conducting the Joint Scoping Meeting. The expected end result of this phase is to get agreement from DOE and the LRA regarding the defined scope of work for the project.

Once the Scoping Phase is initiated, the PM may use the Scoping checklist to track the completion of the requirements outlined in this section. The Scoping checklist is located at the end of this Section.

3.2 PROCESS LOGIC FLOW

The activities involved in the project initiation and scoping phase are shown in the process logic flow diagram (Figure 3-1). The project initiation activities, shown in the left column, flow sequentially from top to bottom. However, some of these activities can actually be performed in parallel. During this phase the PMP is prepared or updated, and the scoping characterization is completed. The second column in the process flow diagram shows the activities leading to the Joint Scoping Meeting, where agreement is reached on the defined scope of work for the project.

3.3 REQUIREMENTS AND GUIDANCE

3.3.1 Project Initiation

Project initiation requires that the Project Lead is identified and the necessary paperwork is prepared to ensure that adequate funding and tracking of that funding is available. The following sections provide additional information with respect to project initiation.

3.3.1.1 Update CPB and Prepare FY Work Plan (PBDs and BEST Input)

If necessary, the CPB is updated in this phase. Based on the CPB, the K-H PM prepares/updates the project baseline documents and loads the data into the BEST system. Using this information along with other applicable documents, the FY work plan is updated for each year of the project. Information on Site PBDs and BEST input can be found on the RFETS website under Strategic Integration and Planning.

3.3.2 Project Scoping

Project scoping involves preparing and updating the PMP and establishing the project team. The following sections provide additional detail on project scoping activities.

3.3.2.1 Prepare/Update PMP

Based on the information and results from the other activities performed in this phase, the K-H PM **SHALL** prepare the PMP for the defined scope of work of this project. If the PMP already exists, or has already been prepared for the deactivation tasks prior to decommissioning, the K-H PM **SHALL** update the PMP in this phase to reflect the facility disposition tasks.

3.3.2.2 Establish the Project Team

The K-H Project Lead is responsible for establishing the project team, which consists of a core team and a support team(s). The team members and organizations **should** be explicitly listed with names, titles, and responsibilities for the project or a specific phase or phases. Contractual relationships and the reporting and work package/cost account authorities and responsibilities **should** also be specified. The core team consists of the Project Lead and several essential members who are expected to participate in all aspects of the project planning and execution. The support team or teams consist of the work planners, engineers, and safety discipline SMEs planning specific parts of the projects (e.g., major tasks/activities).

The makeup of the core team and the project planning/support team(s) is dependent upon the project scope, the hazards expected to be encountered during the performance of the work, the uncertainty of the project/activity scope and hazards, and the complexity of the project/activity. The core team **should** solicit involvement of the support team as early as possible in the project, especially in the initial project meetings. Typical and representative (but not all inclusive) team members for the core team and the support team are shown below.

Typical Core Team Members

- K-H Project Lead
- Environmental Compliance Project Manager
- QA/QC Specialist
- Decommissioning Manager (lead)
- Facility Manager (or representative)
- Facility Operations Manager (lead)
- Cost Estimator/Project Cost Analyst
- Safety Analyst (lead)
- Administrative Support
- Waste Management Specialist (lead)

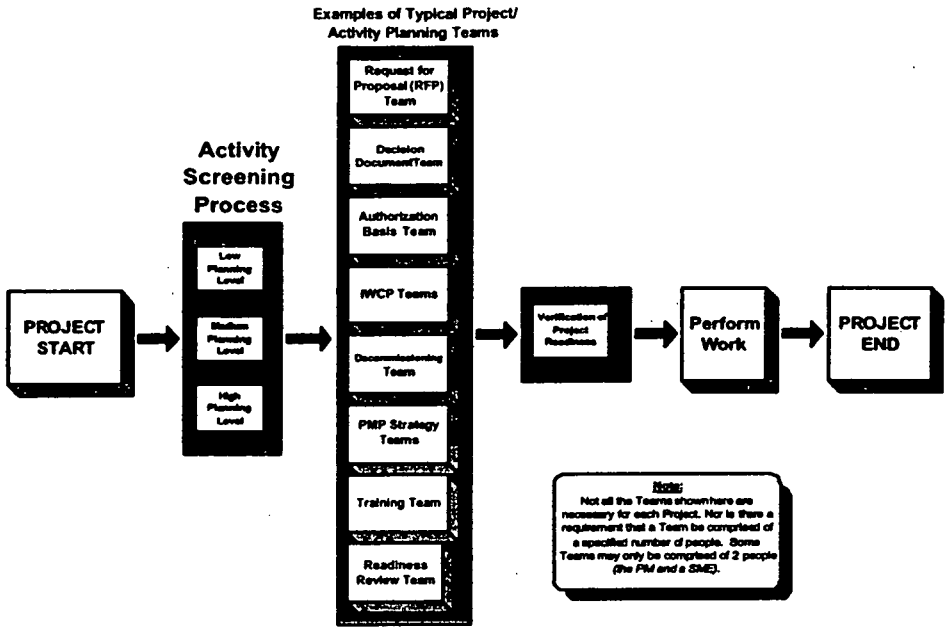
Typical Support Team Members

- Engineering/Engineering Support
- Crafts (Hourly Workers)
- Safeguards and Security
- Emergency Preparedness/Management
- Nuclear/Criticality Safety
- Project Engineer (lead)
- General Counsel (legal)
- Operations Support
- Environmental Restoration
- Radiological & IHS Specialists
- Procurement
- Transportation
- SME for multi-media environmental compliance

It is important to note that, as the facility moves through its planning and execution phases, membership of the team will vary with the needs of the project. However, in order to ensure continuity and efficiency of the project, the core team **should** be identified and assigned for the duration of the project.

In any given project, there ***may*** be more than one team necessary to plan the work. Figure 3-2 provides an overview of the various types of teams that ***may*** be established to ensure all the work associated with the project/activity is adequately anticipated and ready to be performed.

PROJECT / ACTIVITY
TEAM RELATIONSHIPS
Figure 3-2



3.3.2.2.1 Team Member Roles and Responsibilities

The K-H PM is responsible for project budgeting, funding authorization, and project oversight. The specific contractual responsibilities of the K-H PM will be identified in the appropriate documents. The K-H PM is the single point of contact for K-H organization interface with the project.

Some projects require multiple teams for specific or unique activities. In those cases where multiple teams are required, single points of contact **should** be identified as interface points between teams to disseminate information and to establish team hierarchy.

The K-H PM, supported by the core team, identifies, documents, and resolves organizational turnover issues relating to project responsibilities for a facility. The facility transition acceptance checklist prepared by the landlord is reviewed by the project team. Any administrative or AB changes for turnover to the project team are identified by the K-H PM. For each established team, the team's roles and responsibilities **should** be identified and documented to include the following:

TEAM MEMBER ROLES AND RESPONSIBILITIES

- Identify stakeholders
- Develop working schedules
- Select team members for all aspects of the activity
- Identify training requirements/qualifications
- Identify specific roles and responsibilities for each team member

3.3.2.2.2 Team Member Qualifications

Team members **should** have a combination of individual and collective experience and education to provide adequate expertise about the project/activity under consideration. The team can include members from subcontractors, including floor-level workers and SMEs where appropriate, and where such inclusion is required, to reach quality decisions about safety and hazard controls. The members of the

project teams **should** be qualified and empowered by the organization which they represent to provide prompt response and input in technical and policy areas related to that organization's responsibilities.

3.3.2.2.3 Regulatory Interface

The DOE, CDPHE, EPA and DNFSB have identified points of contact, and will typically have an "observer" status within the project team. They will be contacted and invited to routine project meetings. The LRA project point of contact will be consulted to determine which types of meetings they are interested in attending.

The project team will interface with the RFCA Project Coordinator to facilitate resolution of regulatory issues. The DOE project point of contact is the single point of contact with the regulatory agencies; however, the K-H PM will typically have significant communication with the regulators. It is important that the DOE project point of contact be kept aware of all significant communications between the K-H PM and regulators. The K-H PM is responsible for following the Site policy (ELT-26, Agency Contact Protocol) in the preparation of contact records.

3.3.3 Initial Project Kickoff Meeting

The project team will address and discuss the following items at the initial project kickoff meeting. Some of these issues *may* not be applicable to all projects.

PROPOSED PROJECT KICKOFF MEETING AGENDA ITEMS AND ISSUES

- Scope of project (WBS, endpoints, milestones, interfaces, uncertainties, key strategies).
- Project organization (chart, responsibilities, and Site and regulatory interfaces).
- Facility transition status (if needed).
- Facility characterization status.
- Potential deviations from the Site baseline.
- The acceptance checklist and any administrative or AB changes for turnover.
- Deactivation or other activities to be performed outside the scope of RFCA occurring within the same building.
- Functions or equipment moving or vacating the building, and any timing or schedule implications.
- Initial essential requirements, and how final requirement sets will be identified.
- Significant uncertainties that currently exist that could affect the performance of the project/activity (including project/activity characterization information).
- Initial decision document strategy. This *may* include facility type, initial waste management strategy, initial contractual approach, initial equipment disposition strategy, and other initial approaches for essential activities. This item **should** include responsibilities of individuals in this process, and regulatory interfaces.
- Unique or different strategies to be considered by the project.
- Potential project performance criteria, types of performance measures, milestones, and critical decision points.
- Records management.
- Meeting minutes, which **should** be taken and distributed to applicable organizations. Any issues **should** be evaluated or analyzed and identified as action items.
- Earned value milestones

3.3.4 Establish Records Management/Configuration Control System

Project files, record management, and configuration control methods will be established early in the project. They will be maintained and followed throughout the project in accordance with the PMP and

the Site QAP. These files and methods support regulatory and DOE Order compliance, project management and control, contract compliance, communication, product quality, and verification of successful completion. Project closeout includes closeout of project files and disposition of records and files. Appendix A-1 provides a standardized file index and records completion checklist for all Decommissioning projects. This appendix can be used by the project and records management to prepare a specific file index.

The project team will establish a project configuration control and document management process, as described below. The project team can develop a project document hierarchy to assist in the planning process. The Project Deliverables Matrix, Appendix A-2, can be used to establish what documents are needed for project files, controlled documents, and administrative records. The Project Deliverables Matrix (Appendix A-2) identifies:

1. The phase of planning in which the item will be initiated;
2. Whether it's a project milestone;
3. The type of document or record it is, e.g., controlled, AR, or project; and
4. The implementing procedure and driver document, e.g., RFCA, DPP, and DOE Order.

It is important to note that many items on the list are developed simultaneously. Additionally, many have similar or identical information in the body of the document. All work control documents will be clear, concise and accurate, and minimize duplicative information. The Decommissioning Program Manager will provide a trained technical writer to assist the project team in the development of the documents.

The Project Team establishes the necessary and appropriate items listed on the Project Deliverables Matrix (Appendix A-2). The K-H Project Lead documents concurrence with this list. This ensures that all necessary planning elements and work control documents are in place for the specific scope of work prior to execution.

DOCUMENT MANAGEMENT PROCESSES

Administrative Record - Identify documents, which are retained and provided as part of the formal project-specific administrative record file in accordance with Section 4.4 of the RFCA Implementation Guidance Document and 1-F78-ER-ARP-001, CERCLA Administrative Records Program.
Project Files - Official and permanent files are established and maintained by the K-H Project Lead. The project files will be properly identified, protected, transmitted, distributed, retained, retrieved, maintained and dispositioned based on the requirements established in the PMP and consistent with 1-V41-RM-001, Records Management Guidance for Records Sources.
Meeting Minutes/Contact Records - Establish an approach for development and distribution of meeting minutes. This approach will include standard distribution lists and formats. Formal correspondence will be maintained in accordance with 1-11000-ADM-003, Correspondence Control Program. Meeting minutes with the regulators (LRA) are documented in the AR file.
Document Development and Review - Project document development and review are to conform to the Site Document Requirements Manual (SDRM).
Project Controls and Reports - Project controls and reports are documented in accordance with the requirements established in the PMP.
Other Document Control - Project QA requirements are established based on a graded approach. Analytical data quality, program data quality, and NQA-1 elements will be considered and developed as necessary.

3.3.4.1 Administrative Record File

The CERCLA AR is a body of documents that form the basis for the selection of a particular response action (removal or remedial) at the Site. In addition to containing the documents that support a response decision, the AR will contain all relevant documents that were considered, but ultimately rejected. For

each decision, there is a separate AR (i.e., RFCA requires an AR for each project-specific CERCLA Decommissioning activity).

DOE certifies completion of the file by including in each decision document a section or appendix listing the documents that make up the proposed AR for the decision. After completion of the public comment period, all comments received from the public, the responsiveness summary, and the approval letter will be added to the AR File. Approval of the decision document is approval by the regulators of the project's AR File. Once the decision document is approved, the file becomes the Administrative Record for that response action.

Documents are added to an AR File as they are generated. Documents received after - but generated prior to – approval of the decision document, may go into the AR. Documents relevant to the response action, but generated after the decision document is approved, are placed in a post-decision AR File. The following bullets summarize the PM responsibilities with respect to their project-specific AR:

- Identify Records Sources originating potential AR documents.
- Ensure all identified Records Sources who originate possible AR documents are trained in the requirements of this procedure and submit the AR documents to the Administrative Record Coordinator.
- Review listings of potential AR documents for relevance and AR Files for completeness.

3.3.5 Develop WBS/WBS Dictionary

A critical activity early in the Scoping process is the detailing of the WBS and WBS Dictionary for the project. The WBS is the framework on which the estimating and schedule data are organized. It will be developed to an initial level that provides detailed identification of the scope of activities within the Scoping phase, and sufficient detail for the Planning and Execution efforts to support rough-order-of-magnitude cost and schedule estimates. The cost coding structure will also be developed at this time, consistent with the WBS. The WBS and project control requirements for decommissioning are discussed in detail in Section 2.3.6.

3.3.6 Scoping-Level Characterization

Scoping-level characterization effort is intended to provide a general idea of the work and facility condition, the general types of hazards involved, the issues, holes in the data, and the needs for subsequent characterization activities. The scoping characterization activities provide input into the PMP and the RLC. An overview of the entire characterization process for facility disposition projects, and how scoping fits into that process is discussed in Section 2. Guidance for implementation of the scoping characterization requirements is provided in the RFETS D&D Characterization Protocol (MAN-077-DDCP).

3.3.6.1 Historical Records Search and Data Compilation

The project team will perform searches, interviews, and data gathering based on a planned approach that ensures consistency of effort. The focus of this activity will be the identification of historical activities occurring in the facility, history of abnormal events (e.g., spills and accidents), the facility condition, the facility hazards, and significant uncertainties, which will require further characterization. The project team will attempt to establish initial or presumptive levels, types, and locations of contamination based on historical and current documentation.

presence of any other hazardous material or condition. During this walkdown, the project team will identify and document the general types and locations of the essential facility hazards.

3.3.6.4 Summary of Results

The project team will develop a written summary of the facility characterization activities as a result of the facility walkdown. The purpose of the summary is to prepare for the Joint Scoping Meeting and provide a document as a starting point for further characterization. This summary will include the following:

- Facility condition;
- Operational historical;
- System functionality;
- Stored waste, RCRA unit, idle equipment status, and tank management;
- Preliminary hazards identification (radiological, chemical, industrial);
- Individual hazardous substance sites (IHSSs) or other areas identified as potentially contaminated that are associated with the project (i.e. UBCs, PACs, etc.);
- Environmental interfaces or issues other than IHSS locations;
- Status of past/current hazards reduction activities; and
- Expected future hazards reduction before decommissioning begins.

The project team will include in the summary any key issues that must be addressed in the RLC activities during Phase 1 Planning. This will include initiating the DQO process.

3.3.7 Joint Scoping Meeting

Upon completion of the project team's initial kick-off/scoping session, the Project Manager will notify the DOE project point of contact that the external scoping meeting should be scheduled. A presentation outlining the scope of the project will be presented for discussion and consultation with DOE and the LRA in the Joint Scoping Meeting. The purpose of the Joint Scoping Meeting is to coordinate RFCA and other requirements (e.g., Integrated Monitoring Plan, DNFSB, special projects, etc.), attain agreement on the project scope (action), and the type and content of the decision document. Joint Scoping Meeting invitees typically include: K-H, subcontractors, EPA, CDPHE, and as appropriate, the DNFSB.

> *Note: The LRA may choose to invite other regulatory agencies, as needed, to support the Joint Scoping Meeting.*

The scoping issues/items listed in the table below are representative of the topics for discussion in the Joint Scoping Meeting. The level of detail and determination of scope for this meeting will be graded to the project and the facility type. Therefore, not all of these issues/items apply to every scoping meeting. Examples of representative issues/items for the Joint Scoping Meeting are shown below, divided into two groups: informational and consultative.

EXAMPLE/REPRESENTATIVE JOINT SCOPING MEETING ISSUES/ITEMS

Informational

- The purpose of the project/activity or work (objective and principal driver; why the project/activity is being performed).
- Project organization (chart, responsibilities, and Site and regulatory interfaces).
- History of the building operations.
- Environmental Checklist (Waste, Water, Air, NEPA, Ecological, potential ARARs, etc.).
- The type of project/activity or work being performed (i.e., deactivation and decommissioning, demolition, environmental restoration).
- Input identified for the RLC.

Informational

- Significant uncertainties that currently exist that could affect the performance of the project/activity (including project/activity characterization information).
- Project and regulatory interfaces (e.g., this project/activity could have interfaces with other activities in the same location).
- A description of the major work steps, phases or elements.
- Scope of project (WBS, endpoints, milestones, uncertainties, key strategies)
- Initial levels, types and locations of contamination based on historical and current documentation.
- Principal types of hazards directly involved with project/activity or expected to be encountered during performance of project/activity (keeping this assessment at a high level).
- Strategies for decontamination and deactivation of equipment and processes.
- Volumes, types and methods for handling the various types of wastes encountered and/or generated (i.e. waste management strategies).

Consultative

- The starting and end points for the project/activity (project/activity boundaries).
- Permitting strategies (e.g., RCRA, etc.).
- Proposed facility type.
- Proposed Decision Document required: Type (i.e., PAM, DOP, IM/IRA, RSOP), content, and public comment period.
- Initial performance standards and potential ARARs.
- Identification of regulatory authorities and decision-makers (RFCA, EPA, CDPHE, DOE, etc.).
- Schedule for regulator review periods.

The LRA, DOE, and selected members from the project team (lead by the K-H PM) will conduct the Joint Scoping Meeting. The K-H Project Lead, in coordination with DOE, will make a presentation of the issues/items prepared in the previous task. The consultative issues/items will be presented as items open for discussion at the meeting.

As an elaboration to the consultative issues/items listed in the table above, the project team will be prepared to discuss the following three key issues during the Joint Scoping Meeting:

- Environmental strategy – This is a discussion of the various environmental and ecology requirements, potential impacts, environmental controls, and the necessary path forward. Included in this discussion will be a review of RCRA Closures, regulatory and permit requirements, monitoring issues and other potential environmental concerns.
- Identification of requirements that would be applicable and/or relevant under the CERCLA process. This information would be formalized in the decision document, if applicable. The following are examples of what will be considered: waste storage, general stormwater permit for decommissioning activities, RAD/NESHAP, wastewater handling and-available treatment facilities, and impacts of project stormwater runoff.
- The initial, proposed list of potential ARARs, including highlighting of specific differences from other decommissioning projects. The listing of potential ARARs identified in the RFCA Implementation Guidance Document, Appendix K, will be consulted.

Meeting minutes will be taken and distributed to applicable organizations and be placed in the AR file by the K-H PM. Any essential issues to be evaluated or analyzed will be identified as action items in the meeting minutes. Action items from the meeting will be formally dispositioned.

4 PLANNING AND ENGINEERING

The purpose of this section is to present the requirements and guidance for performing the Planning and Engineering activities of the facility disposition project prior to project execution. One of the objectives of this phase is to continue the facility characterization process through the RLCR and to confirm the facility type. Another objective is to complete all the engineering, work planning, and authorization basis activities leading up to the readiness determination and final work preparations in the project execution phase. A major activity in this phase is to update and approve the PMP for work execution, which includes finalizing all the engineering design and scope determinations and the contracting strategy based on the additional characterization, engineering studies, and engineering assessments.

4.1 OVERVIEW

This section defines the requirements for facility characterization that ultimately lead to the preparation of a RLCR. Several activities related to work authorization and preparation for execution also are described, including the following:

- Finalizing and approving the PMP
- Finalizing the contracting and procurement strategy
- Developing the work control documents
- Completing the AB documents
- Completing the RFCA Decision Documents

Prior to the planning phase, the project scope in the PMP has been defined, and the Joint Scoping Meeting has been conducted. At the completion of Planning, the project has LRA concurrence of facility type, adequate information to support the development of work control documents, and a reasonable certainty of the scope and methods to accomplish the project.

One of the planning activities in this phase includes establishing the method of accomplishing the scope and evaluating project decisions necessary to develop DQOs. Further feasibility studies are performed to validate these methods in parallel with the RLC. At completion of the RLC, and in parallel with developing the RLCR, additional field data will be factored into the work planning through engineering studies/assessments and feasibility studies to establish the baseline scope and approach for the project.

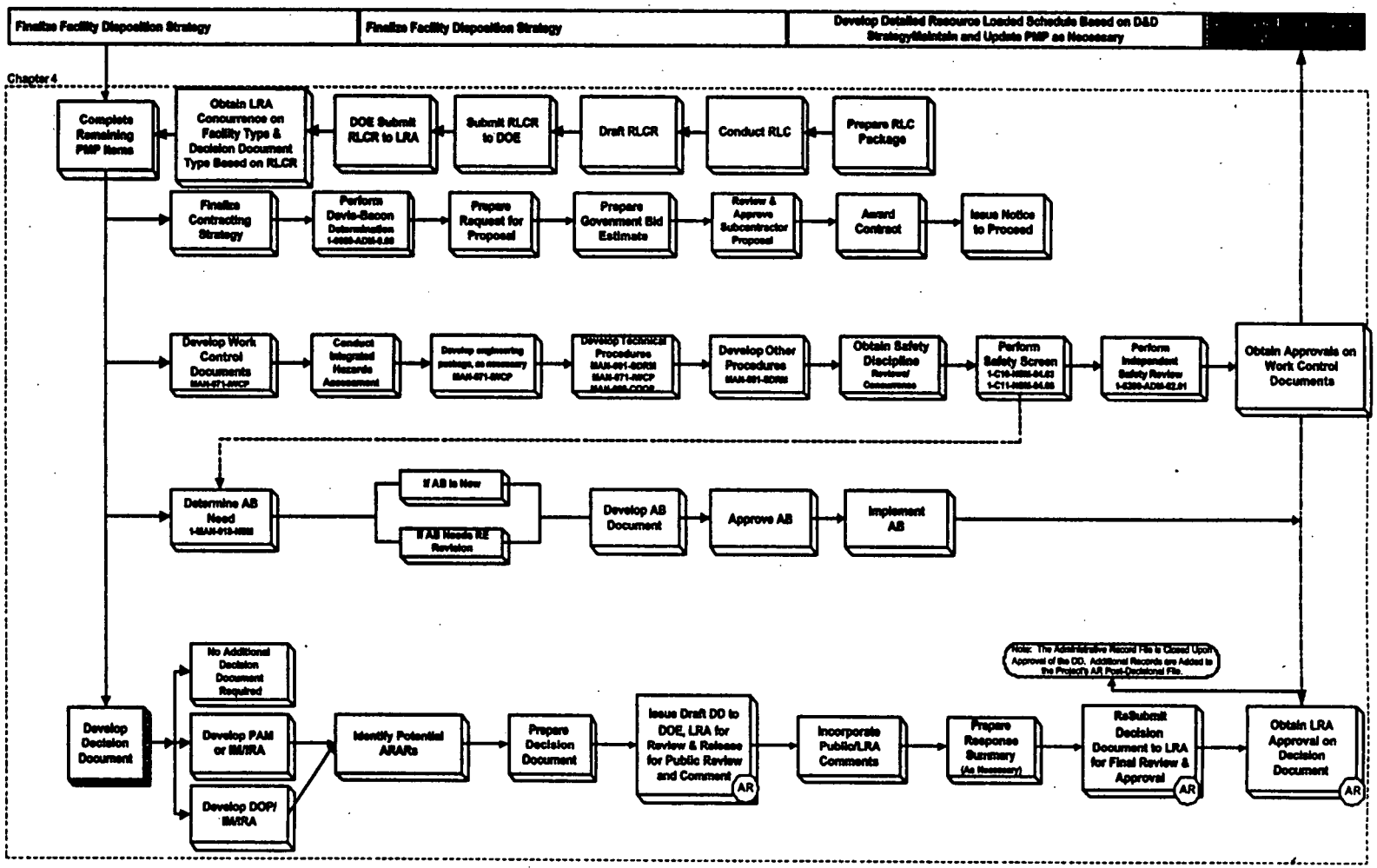
The characterization activities performed in this phase include the development of the RLC Package, coordination with the work planning and scoping activities, conducting the field characterization, development of the RLCR, and submittal of the RLCR through DOE for concurrence by the LRA.

Once the Planning is initiated, the PM may use the Planning checklist to track the completion of the requirements outlined in this section. The Planning checklist is located at the end of this Section.

4.2 PROCESS LOGIC FLOW

The Planning activities are shown in the process logic flow in Figures 4-1. Figure 4-1 shows the steps associated with Reconnaissance Level Characterization, facility typing, and detailed planning, including finalization of the PMP and the RFCA decision document. These two documents provide the basis for developing the work control and authorization basis documents and performing the final preparations prior to work execution. The results from the confirmation of the facility type are used as the basis for developing the required RFCA decision document (e.g., DOP, IM/IRA, or PAM).

Figure 4-1
PLANNING AND ENGINEERING
PROCESS FLOW DIAGRAM



4.3 REQUIREMENTS AND GUIDANCE

4.3.1 Update and Approve PMP

Based on the information and results from the Planning activities, the PMP is updated and approved. The RLC, engineering assessments, and feasibility studies provide the key input for this update. Specific information to be provided in this updated PMP are listed and discussed in Section 2. The following sections provide additional requirements and guidance for updating the PMP during this phase of the project.

4.3.1.1 Preliminary Method Options Analyses

Method options analyses are the actions that support decisions between programmatic or technical alternatives. Not all activities in the planning and execution will present issues or require unique decisions; many activities will be nearly identical to activities in other projects or routine Site activities. Where previous performance was adequate, further analysis is not required. Where previous performance was inadequate, new technology or approaches offer opportunities, unique features present problems, or uncertainties pose questions, the project will identify as many options as reasonable to minimize having to revisit the issue at a later stage of planning or execution.

The project team identifies significant technical issues, based on knowledge of facility and the scoping-level characterization. These issues may be significant due to safety and environmental issues, cost impact (decommissioning or landlord), interface with other in-building organizations, differences or similarities with other projects, lessons learned, level of uncertainty, and integration with other Site projects (e.g. resources).

4.3.1.2 Develop Contracting Strategy

In order to support planning and project execution, it is important that the project team begins to develop its strategy towards performing and executing the work. In this planning phase, the project team further develops the contracting strategy discussed in the Joint Scoping Meeting. This could include type of pricing and who is performing work (in-house, use of bargaining unit or building trades personnel). The project team continues to perform Davis-Bacon determinations (in accordance with the Davis-Bacon Process, 1-90000-ADM-9.05) as necessary, and develop RFPs required to avoid project delays. When selecting subcontractors, the project team will use the established Site procurement process for the selection of subcontractors, including the developing a contracting and procurement strategy.

4.3.1.3 Develop Waste Management Strategy

In order to support Phase I planning and to assess the impacts of waste generation on waste management and transportation, it is important to have a project waste management strategy as early in the project as possible. In this Phase, the project team updates the waste estimates included in the CPB and any additional assessments. The project team defines the scope of activities based upon the results of the RLC, decontamination waste, and volume reduction evaluations required by the final PMP.

4.3.2 Reconnaissance Level Characterization

Reconnaissance level characterization is performed to establish a definitive baseline of information when planning for decommissioning of Type 1, 2 and 3 facilities. This phase includes a review of information to establish a definitive baseline of contamination, hazards, and facility condition necessary to complete the planning effort. An overview of the entire characterization process for facility disposition projects, and how RLC fits into that process, is discussed in Section 2. Guidance for implementation of the scoping characterization requirements is provided in the DDCP.

4.3.2.1 Prepare a Reconnaissance Level Characterization Package

Per the RLCP, an RLC Package is prepared to establish the survey and sampling instructions for facility characterization for Type 1, 2 and 3 Facilities. The Package follows the guidance provided in the RLCP and outlines the sampling and survey methodology for characterization by defining the type, quantity, condition and location of radioactive and hazardous materials.

4.3.2.2 Conduct Reconnaissance Level Characterization

Following preparation of the RLC Package, facility walk-downs are conducted by a team consisting of K-H Decommissioning Program representatives and any other Site party directly affected by the disposition, such as, operations, deactivation, decommissioning, engineering, health and safety, radiation protection, nuclear and criticality safety, environmental, and safeguards and security.

The radiological and chemical (including PCBs and asbestos) condition of the facility are assessed in order to identify radioactive or hazardous waste storage areas, contaminated areas and hazards, as well as physical safety hazards or other conditions that could affect decommissioning activities.

4.3.2.3 Prepare Reconnaissance Level Characterization Report

A RLCR will be prepared to document the results of the information gathered during the characterization effort and previous engineering studies and assessments, and to recommend the facility type. This report provides the results, summarizes the hazards and risks associated with them and provides adequate detail to allow DOE to determine the facility type. The RLCR will follow the guidance provided in DDCP. The RLCR will include:

- An executive summary, which provides a general overview and summary of the report.
- An introduction, which describes the purpose, scope and content of the report.
- A review of the building/cluster operating history, which describes the history of the buildings, past and current operations, and a physical description of the building.
- A summary of characterization/survey activities, which describes the DQOs, sampling and field measurement/survey methods, procedures and equipment, and laboratory analysis.
- An identification of building hazards (e.g., physical, radiological chemical, asbestos, pressure vessels, electrical, wastes, etc.).
- A discussion of decommissioning waste types and waste volume estimates.
- An assessment of the data quality, including data verification and validation.
- A discussion supporting the recommendation on final facility type and a discussion regarding the next step in the facility disposition process, including alternative assessments and engineering studies.

4.3.2.4 Submit RLCR to DOE for Review and Approval

Once characterization has been completed and a draft RLCR has been prepared, the RLCR and cover letter recommending facility type will be forwarded to the project team representatives for review. Following comment resolution, the RLCR is approved and submitted to DOE for review and approval. The level of detail and content is evaluated to assure compliance with the DDCP. Once approved by DOE, DOE submits the RLCR to the LRA. Since the RLCR is approved by DOE, it falls under the government furnished services and items requirements in the contract. DOE has 20 days to complete the review of the RLCR. K-H will coordinate the RLCR review with DOE to ensure that DOE is aware of the schedule of the RLCR preparation. A letter signed by the appropriate Project Manager must accompany the RLCR when it is submitted to DOE, with copies of the letter distributed to the K-H and DOE contracting officers.

4.3.2.5 DOE Submits RLCR to LRA for Review and Concurrence

The RLCR is forwarded by DOE to the LRA. The LRA has 14 calendar days to review the RLCR and the facility type classification. The completed RLCR and the concurrence letter from the LRA, if available, are placed in the project-specific administrative record file. The facility-type confirmation is used as a basis for developing the required RFCA Decision Document in the Phase II Planning and Engineering. The LRA may concur, non-concur, or not respond to the RLCR submittal. No response from the LRA after 14 days is considered approval. Non-concurrence will be addressed through the RFCA dispute resolution process.

4.3.3 Work Control Document (WCD) Development

During Planning and Engineering, the facility disposition work scope is finalized and documented in the PMP, where it is divided into specific work elements. Each of the major work elements requires that one or more work control documents be developed to perform the work. Development of work control documents is an iterative process and includes review and assessment of the work products (e.g., SME concurrence, management reviews, independent safety review, and quality assurance evaluations). Feedback from previous work is used in the development of the work control documents.

Based on the facility disposition scope, which is divided into major work elements in the PMP, the Project Lead, with support from the project team, determines the appropriate type and number of work control documents required for each major work element. Guidance is provided in the IWCP Manual to assist the Project Manager in making these decisions. In addition, descriptions of the different types of work control documents are contained in the IWCP Manual.

4.3.4 Authorization Basis Document Development

Facility disposition projects usually involve activities that are not included in the facility AB document currently in place for the operations or deactivation phase of the facility. Therefore, as a minimum the facility disposition activities need to be reviewed to verify that they are included in the current facility AB document. In most cases, the change in mission or scope for the specific decontamination and decommissioning activities involved in a facility disposition project will require a revision or update to the facility AB document. This change to the facility AB is completed and implemented prior to the readiness determination, work preparation, and work execution phase of the facility disposition project.

For facilities that are classified as a Hazard Category 2 or 3 Nuclear Facility, the AB document is reviewed and approved by DOE and takes the form of a Decommissioning Basis for Interim Operation (DBIO). Note: There are no Hazard Category 1 nuclear facilities at RFETS. A revision to the operational phase AB document is usually required for nuclear facilities due to the change in mission and scope of the facility from operations to closure. This revision can take the form of a new AB document or a page change. Significant changes to AB documents usually require an implementation plan to implement the revised facility control set.

For non-nuclear facilities (e.g., radiological or industrial facilities, less than Hazard Category 3) that are being planned for facility disposition, the AB is provided by the Site Safety Analysis Report (Site SAR).

The following requirements for the development of authorization basis documents related to facility disposition projects are divided into non-nuclear and nuclear facilities.

4.3.4.1 Non-Nuclear Facilities

This section applies to facilities that are classified as less than Hazard Category 3 (e.g., "radiological" or "industrial" facilities) as defined in DOE Standard, DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994.

If an authorization basis or safety analysis currently exists for the facility, the scope of the facility disposition project is compared to the scope analyzed in the safety analysis documentation. The changes in scope are identified and documented for further analysis. If no changes in the facility scope are required to accommodate the facility disposition project, the Project Lead will document this review and continue with the facility disposition process in this section. If there is no authorization basis or safety analysis documentation for the scope of the facility disposition project, the Project Lead will perform a safety analysis of the new scope.

A safety analysis of the new or revised scope of work for the facility disposition project is performed and documented as an ASA (FSA or equivalent safety analysis). The safety analysis documented above may be kept as a separate document, or included with the HASP for the project or facility. In addition, the hazard information collected and documented as part of the RLCR (See Section 4) can be used as input to the safety analysis for the authorization basis document. ASAs are to include, as a minimum, the following subsections:

- Facility/project activities analyzed;
- Hazards identified;
- Qualitative/quantitative analyses performed; and
- Controls required to prevent /mitigate hazards (administrative and engineered controls, including system functional requirements).

Based on the completed safety analysis, any new or revised administrative or engineered controls are implemented in the facility. A formal Implementation Plan can be used to implement the new or revised controls depending on the extent and magnitude of the changes. Successful implementation of the changes in the facility authorization basis controls are verified in accordance with the Readiness Determination Manual.

4.3.4.2 Nuclear Facilities

As required by the Nuclear Safety Manual and DOE Order 5480.23, *Nuclear Safety Analysis Reports*, this section applies to facilities that are classified as Hazard Category 2 or 3 "nuclear" facilities. This classification is defined in the following DOE Standards: DOE-EM-STD-5502-94, *Hazard Baseline Documentation*, August 1994; DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Orders 5480.23*, Nuclear Safety Analysis Reports, December 1992.

The change in scope or mission of the facility based on the proposed work being performed as part of the facility disposition project is reviewed in accordance with the Nuclear Safety Manual and the applicable safety evaluation process (SES/USQD) implemented for the facility. If the safety evaluation indicates that the new or revised activities can be performed within the current facility authorization basis document, then this review is documented and filed with the work control documents. If a change to the facility authorization basis document is required, there are several options for changing the document. The simplest is to make the change during the next annual update. Another option is to make a page change to the document that requires DOE approval. The most complicated change is to perform a major revision or develop a new authorization basis document. All of these changes to the facility authorization basis document are performed in accordance with the Nuclear Safety Manual and the applicable implementing procedures for the facility. This includes performing a safety analysis (if required); determining necessary additional or revised engineered or administrative controls; developing changed pages, a revised document, or a new document; and going through the review and approval process

(internally and DOE). Some information from the safety analysis and control set determination can be useful to the work planning teams developing the work control documents and to the project team developing the HASP for the project or facility.

Based on the revised or new authorization basis document, any new or revised administrative or engineered controls that are required to be implemented in the facility in order to perform the facility disposition project are implemented by the Facility Manager in accordance with the Nuclear Safety Manual. At the discretion of the Facility Manger, a formal Implementation Plan can be used to implement the new or revised controls depending on the extent and magnitude of the changes. Successful implementation of the changes in the facility authorization basis controls are verified in accordance with the Independent Verification Review process.

4.3.5 RFCA Decision Document Development

This section presents the requirements for the development of a RFCA decision document for each of the three facility types. The guidance for determining if a RFCA decision document is required is contained in Section 1.1.4 of the DPP. If a RFCA decision document is required for the project, the specific requirements and guidance for developing the RFCA decision document by facility type is discussed below. Appendix C-1 presents a template for development of the RFCA decision documents that is applied using a graded approach for a PAM, IM/IRA, or DOP. Figure 4-2 depicts the process flow for selecting the appropriate decision document. Since RFCA decision documents are reviewed and approved by DOE, it falls under the government furnished services and items requirements in the contract. DOE has 20 days to complete the review of a RFCA decision document. K-H will coordinate the review with DOE to ensure that DOE is aware of the schedule of the RFCA decision document preparation. A letter that is signed by the appropriate Project Manager must accompany the RFCA decision document when it is submitted to DOE, with copies of the letter distributed to the K-H and DOE contracting officers.

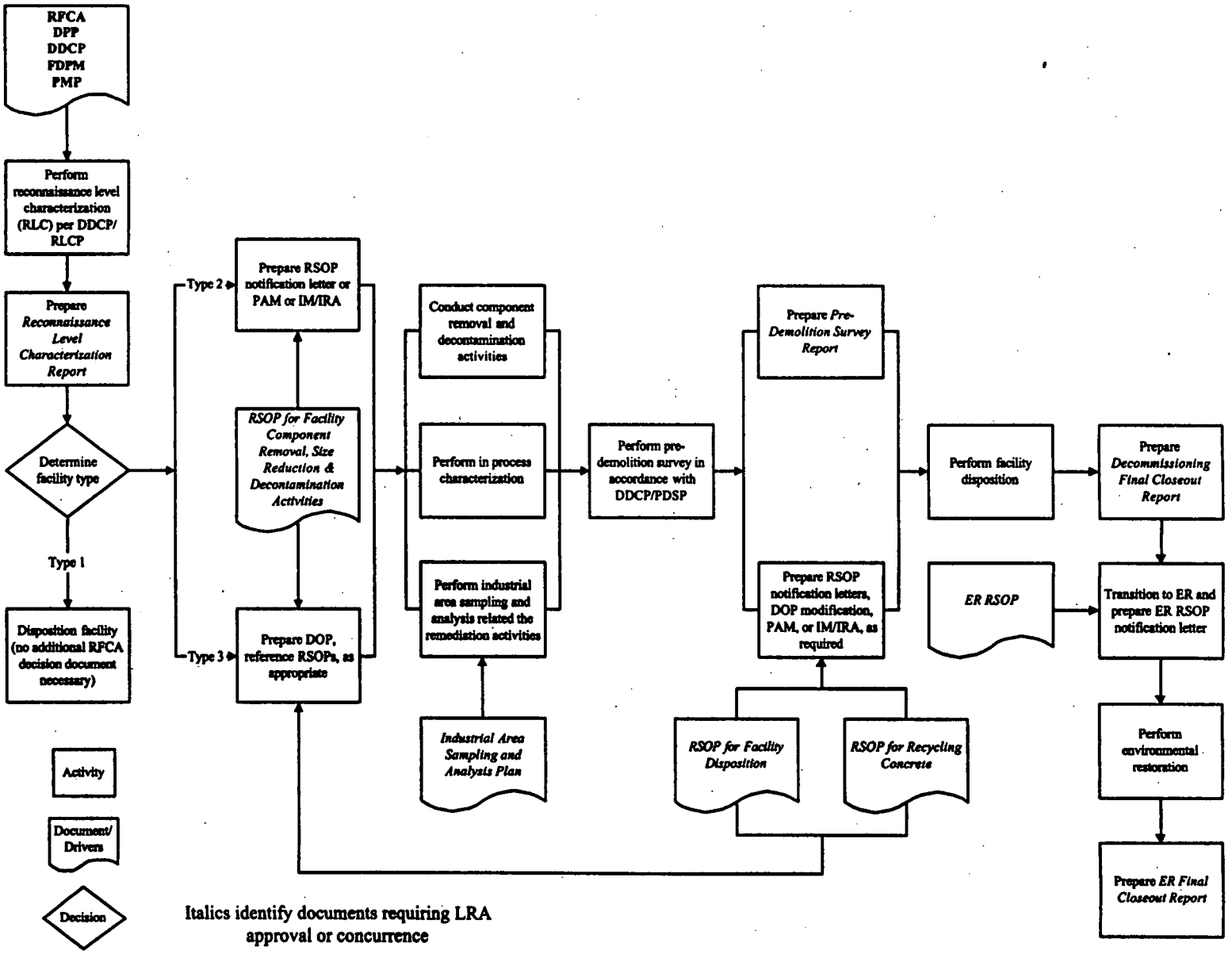
4.3.5.1 RFCA Standard Operating Protocol

An RSOP is an approved protocol that applies to a routine decommissioning and environmental restoration activity regulated under RFCA. An RSOP can be used in lieu of preparing a project-specific decision document for repetitive, routine activities. An RSOP must be approved only once, although it may be used on several projects. However, DOE must notify the LRA that the RSOP will be used on a specific project. Since decommissioning activities are often similar in nature, RSOPs are an effective way to document work processes while minimizing paperwork at the project level. The project team should determine if any approved RSOP applies to any of the project activities. Appendix C-2 presents a checklist that the PM should use to determine if a project can use the RSOP for Component Removal, Size Reduction, and Decontamination Activities. The checklist can be included with the notification letter or is placed in the project records. If an approved RSOP does exist, the project will write a letter to DOE specifying where and how the RSOP will be implemented. The RSOP notification letter content will be in accordance with the requirements specified in the RSOP. For activities that are outside of the scope of the RSOP, a RFCA decision document will be prepared to cover those activities.

There are currently three RSOPs approved, and two RSOPs are planned. These RSOPs cover a variety of work scope and for routine decommissioning and remediation activities should cover all of the proposed activities. The following is a summary of the RSOPs:

- RFCA Standard Operating Protocol for Recycling Concrete, approval received 10/18/99. This RSOP addresses the recycling of concrete that meets the unrestricted release criteria and the use of the concrete as backfill on-site.

Figure 4-2. Closure Documentation



- RFCA Standard Operating Protocol for Facility Disposition, approval received 10/5/00. This RSOP provides the decision for the demolition of all buildings at RFETS, provides the demolition methods and controls for facilities that meet the unrestricted release criteria, and provides NEPA coverage for LLW and LLMW shipments. A pre-screen has been conducted for the demolition activities specified in the RSOP, which indicated that the proposed activity of implementing the RSOP does not require completion of a Safety Evaluation Screen.
- RFCA Standard Operating Protocol for Facility Component Removal, Size Reduction, and Decontamination Activities, approval received 1/22/01. This RSOP provides the methods and controls for facility component removal, size reduction, and decontamination. It also includes the methods and controls for the removal of contaminated external walls and roofing.
- RFCA Standard Operating Protocol for Asphalt and Soil Management. This RSOP has been drafted and addresses soil management during maintenance and temporary activities Site-wide. This RSOP will be used for both decommissioning and environmental restoration.
- The Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation. This RSOP has been drafted. This RSOP addresses the remediation of the industrial area, including under building remediation and IHSS remediation. A separate document will be prepared to address caps and in-place remediation activities.

4.3.5.2 Type 1 Facility RFCA Decision Documents

Decommissioning of facilities classified as Type 1 (uncontaminated) based on a RLCR do not require any additional RFCA decision documents and can proceed based on plant procedures and infrastructure. However, a scoping meeting and notification letter is required. If contamination is discovered during decommissioning of a facility classified as Type 1, decommissioning activities in the affected areas will cease until the LRA is notified and the potential need to reclassify the facility is collaboratively considered.

Discovery of contamination after the determination that the facility is Type 1 may not necessarily result in the need to reclassify a facility into the Type 2 classification. If contamination can be removed by methods in which there is no threat of release of a hazardous substance to the environment, for example by simply cutting out the fixed contamination, the facility may remain as Type 1. Contamination will be cleaned up and properly disposed using existing radiological and hazardous waste management procedures.

Reclassification as a Type 2 facility will be considered in any instance where removal techniques involve a threat of release of a hazardous substance to the environment (as determined by the consultative process with DOE and the LRA).

No further regulatory involvement for Type 1 facilities is required for facilities containing asbestos, provided the project team follows the requirements of the Site asbestos management program.

For Type 1 facilities containing PCBs that are not contaminated with radioactive materials, no further regulatory involvement is required, provided the project team follows the requirements of 40 CFR 761. In this case, no further RFCA decision documents are required, and the waste is managed in accordance with regulatory and procedural documents.

4.3.5.3 PAMs and IM/IRAs

PAMs are applied when the project execution can be completed within 6 months and IM/IRAs are applied when the execution time is 6 or more months. The process for approval of PAMs and IM/IRAs, and the required contents for each, are presented in RFCA paragraphs 106 and 107, respectively. The template, table of contents, and document preparation guidance for developing a RFCA decision document are provided in Appendix C-3. Using a graded approach, this template is tailored for a PAM or IM/IRA as discussed with the LRA in the Joint Scoping Meeting.

The PAM or IM/IRA is submitted to DOE for review and approval. After comment resolution and DOE approval, DOE submits the PAM to the LRA and releases it for public comment. DOE submits the draft IM/IRA to the LRA fourteen days before releasing it for public comment. DOE and the LRA agree in advance to the length of the public comment period. Following resolution of the public comments, a responsiveness summary is prepared, and the PAM or IM/IRA is revised, if necessary, and approved by the LRA. The draft RFCA decision documents, responses to official regulatory comments, formal responsiveness summaries, and the final PAM or IM/IRA are placed in the project-specific administrative record file.

4.3.5.4 DOPs

A DOP is required on all Type III facilities, and is prepared and approved in accordance with the RFCA IM/IRA approval process. A DOP contains sufficient information so the regulators can be satisfied that the project can proceed compliantly, with a high probability of success. Support facilities associated with a major project may be included in the DOP if they can be managed in the same project. The template, table of contents, and document preparation guidance for RFCA decision documents (including DOPs) are provided in Appendix C-3. Using a graded approach, this template is tailored for a DOP.

The project team prepares the DOP and submit it to DOE for review and approval. After comment resolution and DOE approval, DOE submits the draft document to the LRA fourteen days before releasing it for public comment, in accordance with the RFCA IM/IRA approval process. DOE and the LRA agree in advance to the length of the public comment period (either 45 or 60 days). Following resolution of the public comments, a responsiveness summary is prepared, and the DOP is revised, if necessary, and approved by the LRA. The draft RFCA decision document, responses to formal regulatory comments, formal responsiveness summaries, and the DOP are placed in the project-specific AR file.

PLANNING AND ENGINEERING CHECKLIST		
Project:	**Project Manager:**	
Activity	**Date Completed**	**Signature**
1. Update and approve PMP. (FDPM, 4.3.1)		
2. Develop contracting strategy. (FDPM, 4.3.1.2)		
3. Develop waste management strategy. (FDPM, 4.3.1.3)		
4. Develop reconnaissance level characterization package in accordance with the Site-wide Reconnaissance Level Characterization Plan. (FDPM, 4.3.2.1)		
5. Conduct reconnaissance level characterization in accordance with reconnaissance level characterization package. (FDPM, 4.3.2.2)		
6. Prepare Reconnaissance Level Characterization Report (FDPM, 4.3.2.3)		
7. Submit reconnaissance level characterization report to DOE for review and approval with letter from Project Manager. (FDPM, 4.3.2.4)		
8. After LRA review and concurrence, place reconnaissance level characterization report and concurrence letter in the administrative record file. (FDPM, 4.3.2.5)		
9. Develop authorization basis document. (FDPM, 4.3.4)		
10. Develop RFCA decision document and/or prepare notification letters to utilize existing RSOPs. (FDPM, 4.3.5) Attach a list of decision documents that will be used for the project.		

5 PROJECT EXECUTION

The purpose of this section is to present the requirements and guidance for performing activities in the project execution phase of the project, following completion of the Phase II Planning and Engineering. The objective of this phase is to complete the work preparations and then execute all planned work.

5.1 OVERVIEW

The activities addressed in this section include executing the procurement contracts, demonstrating a readiness to proceed, and executing the actual physical work activities within the major headings of site preparation, dismantlement, demolition, and transition to environmental restoration.

Dismantlement includes removal of process equipment and the equipment and services that directly support it. In-process characterization is performed during dismantlement and decontamination with the resulting documentation being formatted to support the Pre-Demolition Survey. Demolition includes the physical work to bring the facility to the ground including the slab (defined as the footprint or pad that is left following demolition).

The final step in project execution prior to close out is the transition to environmental restoration. This may include surveying and documenting the slab(s), as necessary, and verifying that any under slab contamination is acceptable to leave for future environmental restoration. The Site's ER organization participates in the review of the results of the sampling. This will determine if immediate action is necessary. It is intended that the transition of physical work between decommissioning and ER will be seamless, with ER involvement increasing as the transition approaches and decommissioning involvement decreasing after transition starts.

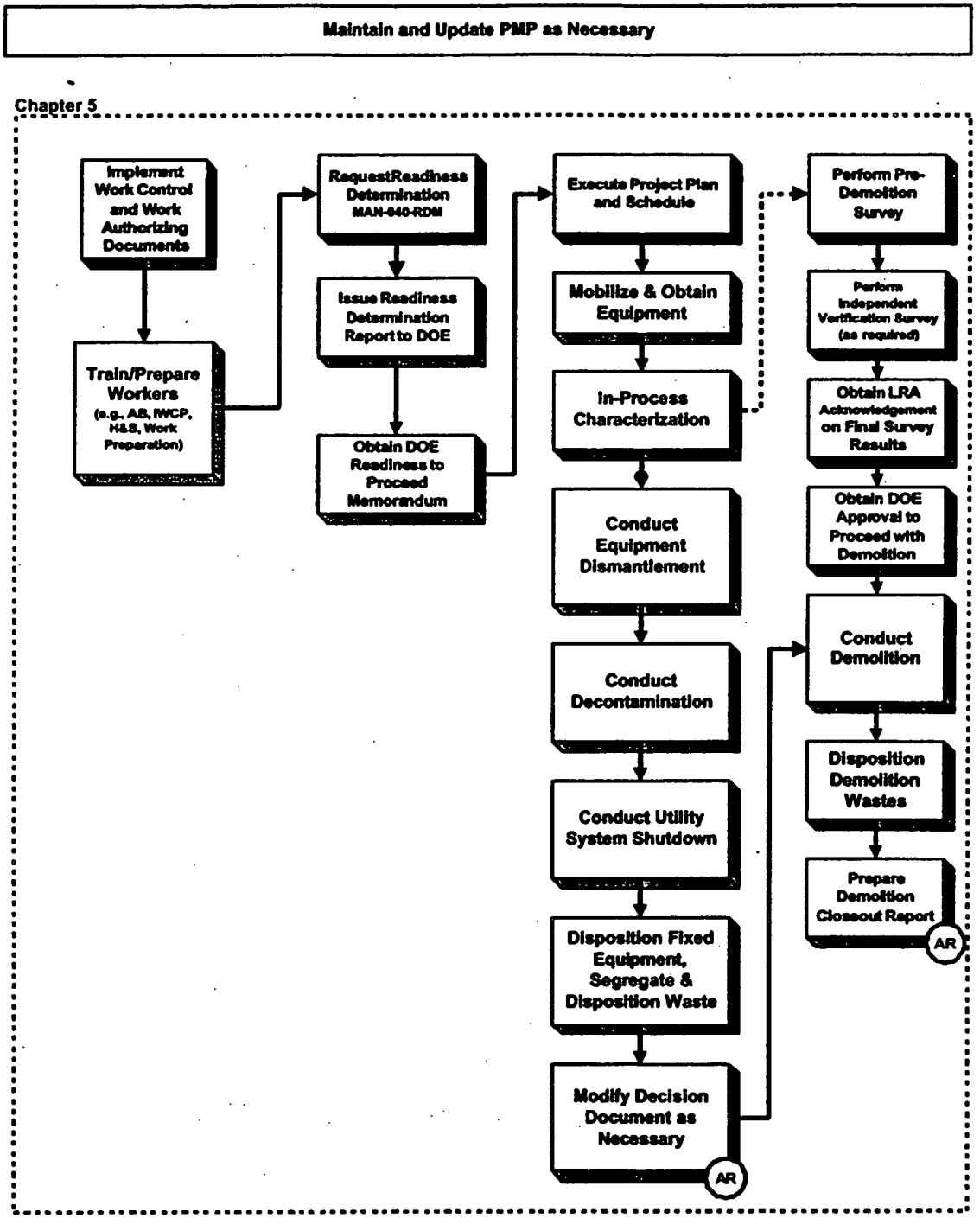
During project execution, the PMP and its applicable supporting plans are updated as needed based on the changing information found during the in-process characterization and above listed activities. Waste is managed in accordance with the Site's requirements. As new information is obtained that significantly impacts the categorical generation rates, the Material Stewardship Project is notified of this impact.

Once the Execution Phase is initiated, the PM may use the Execution checklist to track the completion of the requirements outlined in this section. The Execution Phase checklist is located at the end of this Section.

5.2 PROCESS LOGIC FLOW

The activities involved in the project execution phase are shown in the process logic flow diagram in Figure 5-1.

Figure 5-1
PROJECT EXECUTION
PROCESS FLOW DIAGRAM



5.3 REQUIREMENTS AND GUIDANCE

For Type 1 facilities, many of the steps and requirements described below are eliminated. For all facility types, the DPP is the RFCA decision document that is used in the preparation of any additional facility specific decision documents, if required. In accordance with the DPP, decommissioning of buildings classified as Type 1 (uncontaminated) based on a RLCR will not require additional RFCA decision documents (other than the DPP) and will proceed based on plant and/or equivalent procedures. However, if contamination is discovered during decommissioning of Type 1 facilities, decommissioning activities will cease in the affected areas until the LRA is notified and the potential need to reclassify the facility is considered collaboratively. Reclassification from a Type 1 to a Type 2 facility will be considered in any instance where removal techniques may involve a threat of release of an existing hazardous substance (as determined by the consultative process) to the environment.

Decommissioning of Type 1 facilities is therefore simplified to a commercial-type facility removal project (refer to Section 5.3.1). Decontamination is not required, and no pre- or post- demolition survey report is required. The RLCR, with LRA concurrence regarding the facility type (if provided per Section 3.4.4 of the DPP), and the project close-out report will be included in the AR as a project-specific AR file. Appendix E-3 contains a template for a Type 1 closeout report. These documents are available to support the final Corrective Action Decision/Record of Decision (CAD/ROD) for the appropriate OU.

Project execution utilizes the documentation generated in accordance with the previous sections of this manual. Maintaining a safe working environment and a safety awareness culture is paramount to the success of the project and the K-H Team. The RFETS Health and Safety Practices Manual provides additional requirements for Site-specific working conditions with which each subcontractor **SHALL** comply, as appropriate. In addition, subcontractors will work under their corporate health and safety plans, which are approved by K-H prior to the subcontractors working on site.

Job-specific radiological safety is enhanced by the use of the RFETS Radiological Control Manual. Subcontractors **SHALL** execute the work in accordance with this manual, as appropriate.

Maintaining a safety awareness culture is enhanced through the use of the principles of the ISMS. These principles are incorporated into all work control documents, including work plans (reference Sections 2.3.3 and 4). All work plans will be developed and reviewed by various K-H organizations, as required by the IWCP, and by the employees performing the work. Comments from the employees on these plans will be considered. After the work plans are finalized, the work steps will be reviewed with employees.

5.3.1 Details of the Commercial Decommissioning Process

The commercial decommissioning process involves streamlining the requirements for decommissioning a Type 1 facility. Emphasis is placed on referencing industry standards and regulations. Applicable Site requirements are translated into the scope of work without referencing the specific procedures. Under this process, a subcontract will be placed with a qualified subcontractor, and that subcontractor will take the responsibility of completing asbestos abatement, demolition, waste management, and transportation. Most of the Site programs and procedures will not be required because the subcontractor will implement equivalent commercial programs and procedures (i.e., OSHA, RCRA...) to ensure that disposition is protective of human health and the environment.

The procurement of subcontractor support will be structured to provide K-H with a commercial contract vehicle and a qualified subcontractor to perform the work. The key to the procurement strategy is the

development of the Performance Specification to eliminate unnecessary Site requirements while ensuring that the work is performed in manner that is protective of human health and the environment.

Once the subcontract has been awarded, the subcontractor will be required to submit the required plans/procedures/programs for review by the K-H Project Team for equivalency. Determinations of equivalency will be made using a graded-approach. The Project Team will be responsible for determining what is equivalent and will document equivalency and include it in the project files.

5.3.2 K-H Readiness Determination

The Project Lead will prepare project technical description sheets (the format is provided in the Readiness Determination Manual), with a recommended level of approval authority. This will be submitted to the K-H/DOE Joint Evaluation Team (JET) for review and concurrence with the start-up authority for the activity.

After all decommissioning project regulatory and operational documentation is approved and personnel have been trained to the appropriate level of qualification, the PM will ensure that the objectives for operational readiness are satisfied. When these objectives are satisfied, the PM will prepare the Readiness Certification Memorandum and forward it to the President for approval.

5.3.3 Commencement of Execution Activities

After demonstrating the readiness to proceed, the project is ready to initiate physical decommissioning activities, in accordance with the RFCA decision document, Site procedures, PMP, and other project documentation. Activities include dismantlement and demolition. Deactivation, including building stabilization, occurs ahead of dismantlement and involves removal of all loose equipment and contents from process equipment. A partial list includes activities such as: removal of excess chemicals, tooling, empty cabinets, office furniture, miscellaneous tooling, and excess equipment not connected to building systems; the draining and dispositioning of liquid wastes; stabilization of contamination where appropriate; disposition of records; and wiping of gloveboxes. Although deactivation, dismantlement and decontamination are documented as sequential activities, the implementation of these activities is often concurrent for work planning and cost savings purposes.

5.3.4 Dismantlement

Dismantlement includes removing process equipment, packaging wastes, closing remaining RCRA units, removing all remaining distributed systems (utilities), performing in-process characterization, and decontaminating all facility surfaces that are above the release criteria. These activities are performed in accordance with the decision document, PMP, and work control procedures.

The following activities related to installation and/or removal of services, systems, facilities or hazards can also occur during physical dismantlement of the building:

- Temporary installation of services needed to support project operations, which in some cases are temporary alternatives to services to be taken out for project efficiencies. For example, installation of power to offices and work areas to support lighting and decommissioning equipment that ***may*** be disconnected at the main switch gear, to avoid multiple costly Lock Out/Tag Outs.
- Removal of all exposed electrical distribution cables, conduit, panels, fixtures, devices, and trays that can be removed prior to dismantlement operations.

- Removal of all non-load-bearing partitions and walls and false ceilings constructed of wood, transite and wallboard in accordance with the facility authorization basis (non-credited fire barriers).
- Removal of HVAC ducts not important to safety, outlets, and hangers that can be removed prior to dismantlement operations.
- Removal of all fire protection systems that can be removed prior to dismantlement operations.
- Removal of all windows, glass and frames constructed of combustible material that can be removed prior to dismantlement operations.
- Removal of all combustible material and loose metal in the area.
- Asbestos abatement and removal of asbestos waste, which will be:
  - Performed by a licensed asbestos abatement contractor;
  - In compliance with Colorado Air Quality Control Commission Regulation 8, *Control of Hazardous Air Pollutants* (SCCR-1001-10); and
  - Packaged and disposed of in accordance with Site (refer to Waste Management Section below) and State regulations.

  Note: This does not describe Type 3 Facilities; include mobilization or site prep, and deactivation turnover/interface.

5.3.4.1 In-Process Characterization

In-process characterization is performed to evaluate on-going decommissioning activities in preparation for facility disposition. This characterization is performed to assure that adequate data are obtained for waste management, transportation, and building surface decontamination (for facility dispositioning) purposes and to support work control document preparation. This characterization also aids in identifying new hazards that may exist and are uncovered during the dismantlement strip out operations that were not identified in the RLCR. If this occurs, the Project Manager will cease operations in the affected areas, contact DOE, and initiate the consultative process. Although a formal report is not required for this phase of characterization, the DQOs and decision rules for radionuclides, asbestos, hazardous and toxic materials, and other constituents of concern, contained in Appendix B, of the DDCP, will be followed.

The decontamination work will be closely related with the operations support of characterization and pre-demolition survey reports. For example, in-process characterization will determine if decontamination has been adequate (i.e., if unresticted release criteria are met). This work carries the highest cost and schedule risk since the exact amount of work required cannot be determined until the survey work is finished. This work may involve packaging of building materials, characterization, removal of surface coatings, scabbling of concrete surfaces, and decontamination of building surfaces.

5.3.4.2 Pre-Demolition Survey Report

The data obtained from sampling and surveys during dismantlement will be retained, tabulated and summarized in the Pre-Demolition Survey Report. An annotated outline of the Pre-Demolition Survey Report is presented in the Site-wide Pre-Demolition Survey Plan. The Pre-Demolition Survey Report is a RFCA-mandated report. This report will provide data on the nature and extent of radiological and chemical contamination after dismantlement (including decontamination).

In accordance with the DPP and the RFCA decision document, at the conclusion of dismantlement and preparation of the Pre-Demolition Survey Report, Site personnel will confirm their activities have achieved the criteria for the completion of building disposition for buildings that are to be demolished. After approval from the LRA, facility demolition ***may*** occur.

On an as-needed basis, DOE may elect to verify that the results from the Pre-Demolition Survey meet acceptable criteria. Independent review of documentation, survey, and sampling data may be conducted to confirm that requirements identified in the characterization plans were implemented and that characterization was performed within control requirements and tolerances.

5.3.5 Demolition

After completing dismantlement and decontamination, the last steps prior to demolition include: preparation of the Demolition Plan (detailed in the RSOP for Facility Disposition), completing the demolition notification to CDPHE, and disconnecting the facility from plant services, such as:

- Fire suppression water lines;
- Electrical power lines;
- Natural gas lines;
- Process waste lines;
- Steam supply and condensate return lines;
- Telephone lines;
- Local Area Network lines; and
- Water and sewer lines.

> *Note: The bullet lists provided in this section are not intended to be all-inclusive, but rather examples of the types of activities that may be required to be performed.*

Demolition consists of removing the remainder of the physical structures, monitoring for releases during demolition, if required, and dispositioning the resulting waste streams. Specific demolition activities include:

- Removal and disposition of roof-top equipment;
- Removal of roofing material down to the primary roof barrier (concrete slab or steel sheet);
- Removal of equipment attached to the building walls or adjacent to the building;
- Removal of structures;
- Rubblizing of walls, and loading and transport to a sanitary landfill or stockpiled for recycling; and
- Some separation of structural steel from the concrete rubble, but only as necessary to facilitate loading, hauling, and/or stockpiling.

5.3.6 Transition to Environmental Restoration

Environmental Restoration, within the Remedial, Industrial, and Site Services Project (RISS), will be integrated into decommissioning project scoping to decide what part of the structure will be left at the end of decommissioning, and to define the anticipated role of the ER projects at the end of decommissioning. Following decommissioning, areas beneath and adjacent to the building will be dispositioned either by remediation or preparation of a no-further-action justification document. Details on the interface and interaction between Decommissioning and Environmental Restoration are provided in Appendix D-1.

5.3.7 Decommissioning Management During Execution

During project execution, the following decommissioning related reports may be used to document the project and progress, if the facility disposition project involves any deconstruction activities.

REQUIRED REPORTS

Daily Reports - During active decommissioning, starting with the Notice to Proceed and ending with the Final Project Close-out, a daily report will be prepared and distributed. The general form and content of this report is shown in Appendix E-1. The daily report will be prepared by and delivered to project team members at the close of each business day.

Progress Photos - During active decommissioning the PM will document job, particularly subcontractor, progress by photographing significant changes in job. On minor projects, photos will be taken at least once during a job. On significant projects, photos will be taken at start of each project and at least weekly thereafter. The copies of the photos will be printed, with one copy going into the project file and two copies being provided to the Project Manager. All photos will be captioned with the information shown in Appendix E-2.

PROJECT EXECUTION CHECKLIST

Project:	**Project Manager:**	
Activity	**Date Completed**	**Signature**
1. Review/prepare technical description sheets, agree to level of readiness and submit to DOE. (FDPM, 5.3.1)		
2. Ensure personnel training is complete for K-H and subcontractors. (FDPM, 5.3.1.1)		
3. onduct graded project readiness determination in accordance with the Readiness Determination Manual, 1-MAN-040-RDM. (FDPM, 5.3.1.2)		
4. Review/prepare readiness certification memorandum and implementation plan and forward to DOE. (FDPM, 6.3.1.2)		
5. Conduct in-process characterization activities in accordance with Appendix B of the D&D Characterization Protocol. (FDPM, 5.3.3.1)		
6. Prepare Pre-Demolition Survey Report in accordance with the Site-Wide Pre-Demolition Survey Plan and have reviewed and approved. (FDPM, 5.3.3.2)		
7. After LRA review and approval, place Pre-Demolition Survey Report and approval letter in the administrative record file.		
8. Review/prepare Demolition Plan.		
9. Notify the Material Stewardship Project of the estimated project waste generation, by category and update BEST. (FDPM, 2.3.5)		
10. Ensure that the daily reports are prepared from the notice to proceed until project close-out and distributes to project team members at the close of each business day. (FDPM, 5.3.6)		
11. Ensure that photographs are taken of all project progress. (FDPM, 5.3.6)		

6 PROJECT CLOSE-OUT

The purpose of this section is to present the requirements and guidance for performing activities in the project close-out phase of the project, which follow completion of work execution and transition to ER. Preparation for the closeout of all projects begins in the planning phase with definition of project-specific acceptance and closeout criteria included in the PMP and the identification and subsequent development of other planning and work control documents.

In the closing-out of the project, there are several activities that take place. These include the generation and/or closeout of the following reports:

- Partial And Complete Subcontract Close-Out Form *(Appendix F-1)*
- Final Project Closeout Form (FPCO) for Type 2 and 3 facilities *(Appendix F-2)*
- Project Lessons Learned Report
- Final Facility Disposition Decommissioning Closeout Report or Type 1 Facility Closeout Report *(Appendix F-3)*
- Work control documents, including all Engineering documentation and associated work-control forms (e.g., Radiological Work Permits, excavation work permits, hot work permits, etc.)

Appendix A provides more details and discussion on the types of reports typically generated during the project and which ones may need to be closed out. Appendix A-1, the Generic Decommissioning Project File Index and Completion Checklist provides the mechanism to identify what documents were generated and need to be collected and closed-out for the specific project.

> *Note: As part of Close-out actions, it is important to ensure that the post-decision Administrative Record is complete.*

6.1 OVERVIEW

Preparation for the acceptance and closeout of all projects begins in the planning phase with definition of project-specific acceptance and closeout criteria included in the PMP. The acceptance and closeout criteria define project specific tasks, tests, inspections, approvals, and other documentation necessary for project completion, acceptance, and transfer.

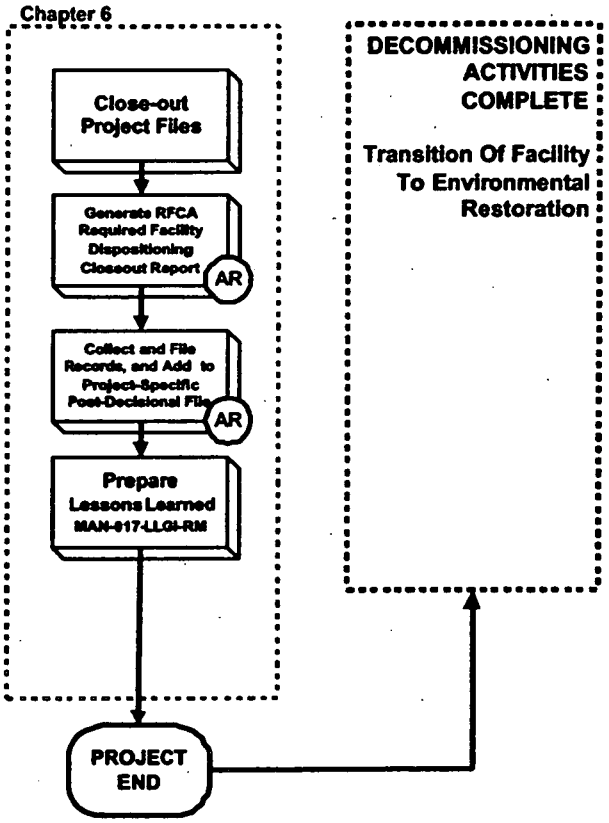
The PM will ensure that all project records are complete, current and retained in a manner that ensures the files can be assembled and provided to the records management organization for proper storage, following project completion. All records acquired or generated by the decommissioning project will be dispositioned in accordance with procedure 1-V41-RM-*001 Records Management Guidance for Records Sources.* Electronic Systems will be dispositioned in accordance with procedure PRO-447-ERM-001 *Electronic Information System Inventory and Retirement Form.* The project files will be organized and maintained in accordance with the PMP, the Generic Decommissioning Project File Index and Project Deliverables Matrix provided in Appendices A-1 and A-2, respectively.

Once the Close-out Phase is initiated, the PM will use the Close-out Phase checklist to track the completion of the requirements outlined in this section. The Close-out Phase checklist will be completed and signed by the PM and the Decommissioning Program Manager prior to project completion. The Close-out checklist is located at the end of this Section.

6.2 PROCESS LOGIC FLOW

The activities involved in the project execution phase are shown in the process logic flow diagram in Figure 6-1.

Figure 6-1
PROJECT CLOSE-OUT
PROCESS FLOW DIAGRAM

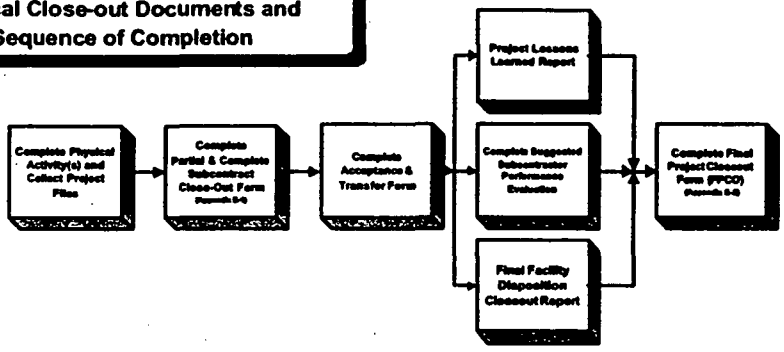


6.3 FINAL PROJECT CLOSEOUT REPORTS AND DOCUMENTATION

Figure 6-2 provides an overview of the sequence of project closeout documentation. For facility disposition projects, the following will be completed as part of final project close-out:

- Partial and Complete Subcontract Close-Out Form *(Appendix F-1)*
- Project Final Closeout Form (FPCO) for Type 2 and 3 facilities *(Appendix F-2)*
- Project Lessons Learned Report
- Final Facility Disposition Closeout Report or Type 1 Facility Closeout Report *(Appendix F-3)*

Figure 6-2
Typical Close-out Documents and Sequence of Completion



6.3.1 Partial and Complete Subcontract Closeout Report

The Partial and Complete Subcontract Closeout documentation provides for the partial or complete "financial" close-out of a task or the project. It provides a mechanism for allowing disbursement of funds for partial or fully completed tasks. An example of the Partial and Complete Subcontract Closeout documentation is shown in Appendix F-1.

6.3.2 Final Project Closeout Form (FPCO)

The FPCO form is provided in Appendix F-2. The FPCO is used to verify the following:

- Subcontractors redline drawings are complete and in accordance with the designed scope of work, and include all approved filed charges. Red-lined drawings have been received from the sub-contractor.
- All applicable subcontracts have been accepted as complete, the files have been consolidated into the project files and indexed in accordance with the project-specific file management plan based on the Project File Index/Records Checklist, and a lessons learned letter has been provided to the Closeout Manager for reference on future similar projects, if applicable.
- Ownership of equipment, systems, structures and components have been transferred to the permanent property custodian, and the project files are ready to be archived.

6.3.3 Lessons Learned Report

At completion of a facility disposition project, the PM will prepare, and submit for record, a Project Lessons Learned Summary Report. Lessons learned include: 1) a good practice or innovative approach that is captured and shared to promote repeat application; or 2) an adverse work practice or experience that is captured and shared to avoid recurrence. To determine if lessons learned should be shared, the PM will consider the potential for this deficiency, event, adverse condition or safety issue to exist in, or to affect other buildings, operations, activities or organizations. If the potential exists, the lessons will be shared.

6.3.4 Decommissioning Final Closeout Report and Documentation

For Type 2 and 3 facilities, a Decommissioning Closeout Report will be prepared for all decommissioning actions when work and relevant final characterization are completed. The report will consist of a brief description of the work that was completed, including: 1) any modifications to the original decision document; 2) final sampling and analysis report(s); 3) a description of the quantity of remediation and process wastes produced; and 4) a statement, if true, that there were no releases to the environment due to the execution of the project, or if not true, a description of the release and the response taken.

The complexity of the Decommissioning Closeout Report and the level of detail will reflect the scope and duration of the action. An example outline is shown below:

- Introduction
- Action description, document project activities
- Verification that action goals were met
- Verification of treatment process (if applicable)
- Radiological analysis (if applicable)
- Demolition survey results
- Waste stream disposition
- Deviations from the decision document
- Description of site condition at the end of decommissioning (e.g., slab, basement, etc.)
- Demarcation of excavation (if applicable)
- Demarcation of wastes left in place
- Dates and duration of specific activities (approximate)
- Final disposition of wastes (actual or anticipated)
- Next steps for the area (e.g., decommissioning is complete; facility demolished or ready for reuse; interim monitoring, if required; or transferred to ER Program for any additional action, if required).

For Type 1 facilities, a Type 1 Facility Closeout Report will be prepared. The Type 1 Facility Closeout Report form is provided in Appendix F-3.

Decommissioning Closeout Reports and Type 1 Facility Closeout Reports will be submitted to the agencies. The DPP requires that upon completion of the relevant final characterization (pre-demolition survey), DOE will notify CDPHE, EPA and the public in writing of the completion of decommissioning for a building or group of buildings. DOE will accomplish notification to the public with a letter to the Rocky Flats Citizen Advisory Board. This requirement may be achieved by providing the Rocky Flats Citizens Advisory Board with a copy of the Closeout Report transmittal letter that is provided to the appropriate agencies. Since the Decommissioning Closeout Report is reviewed and approved by DOE, it falls under the government furnished services and items requirements in the contract. DOE has 20 days to complete the review of a Decommissioning Closeout Report. K-H will coordinate the review with DOE to ensure that DOE is aware of the schedule of the decommissioning closeout report preparation. A letter that is signed by the appropriate Project Manager must accompany the decommissioning closeout report when it is submitted to DOE, with copies of the letter distributed to the K-H and DOE contracting officers.

PROJECT CLOSE-OUT CHECKLIST		
Project:	**Project Manager:**	
Activity	**Date Completed**	**Signature**
1. Complete Project File Index/Records Checklist. (FDPM, 6.3.2)		
2. Complete Partial/Complete Subcontract Closeout Form. (FDPM, 6.3.1)		
3. Complete Project Acceptance and Transfer form. (FDPM, 6.3.)		
4. Complete subcontractor's performance evaluation. (FDPM, 6.3.)		
5. Complete Final Project Closeout Form. (FDPM, 6.3.2)		
6. Complete Lessons Learned Report. (FDPM, 6.3.3)		
7. Prepare Decommissioning Final Closeout Report, or Type 1 Facility Closeout Report, and other documentation, and have them reviewed. (FDPM, 6.3.4)		

APPENDIX A-1
Generic Decommissioning Project File Index And Completion Checklist

Building Number/Complex Number/Project Number	Major Category	Sub-Category	Individual Category	DESCRIPTION	AR	QA Record*	File Completed Date/Init
#####.	00.	00.	00	**FILE INDEX**			
#####.	01.	00.	00	**ADMINISTRATIVE**			
#####.	01.	01.	00	File Maintenance/Records Management			
#####.	01.	02.	00	Administrative	X		
#####.	01.	03.	00	Letters of Appointment/Delegation			
#####.	01.	04.	00	Moves/Space			
#####.	01.	05.	00	Telephone Control Usage Reports			
#####.	01.	06.	00	Website Information			
#####.	01.	07.	00	Human Resources			
#####.	02.	00.	00	**SAFETY/INDUSTRIAL HYGIENE**			
#####.	02.	01.	00	Safety Meeting			
#####.	02.	01.	01	Technical Support			
#####.	02.	01.	02	Decommissioning			
#####.	02.	01.	03	Operations Support			
#####.	02.	01.	04	Maintenance/SOEs			
#####.	02.	01.	05	Management/PSO/WM			
#####.	02.	02.	00	Reading Required Program			
#####.	02.	03.	00	Safety/Industrial Hygiene Deliverables			
#####.	02.	03.	01	Asbestos Abatement Plan (may be part of RLCP)		X	
#####.	02.	03.	02	Asbestos Characterization Report		X	
#####.	02.	03.	03	Asbestos Notification		X	
#####.	02.	03.	04	Chronic Beryllium Disease Prevention Plan		X	
#####.	02.	03.	05	Integrated Job Hazard Analysis		X	
#####.	02.	03.	06	Lead Abatement Plan (may be part of RLCP)		X	
#####.	02.	03.	07	Lead Characterization Report (may be part of RLCR)		X	
#####.	02.	03.	08	Project Specific Health and Safety Plan (may be part of PMP)		X	
#####.	02.	03.	09	Soil Disturbance Permit and Surveys		X	
#####.	02.	03.	10	Criticality Safety Assessment		X	
#####.	02.	04.	00	Surveys		X	
#####.	02.	04.	01	Lighting Survey		X	

Building Number/Complex Number/Project Number	Major Category	Sub-Category	Individual Category	DESCRIPTION	AR	QA Record*	File Completed Date/Init
#####.	02.	04.	02	Noise Survey		X	
#####.	02.	04.	03	Pre-Demolition Survey Results		X	
#####.	02.	04.	04	Post-Demolition Survey Results		X	
#####.	03.	00.	00	**QUALITY**			
#####.	03.	01.	00	Lessons Learned		X	
#####.	03.	01.	01	Rosters			
#####.	03.	01.	02	Lessons Learned Summary Report		X	
#####.	03.	02.	00	Receiving Inspections		X	
#####.	03.	03.	00	Nonconformance Reports		X	
#####.	03.	04.	00	Calibration Records		X	
#####.	03.	05.	00	Corrective Action Reports		X	
#####.	03.	06.	00	Audit Report		X	
#####.	03.	07.	00	Management Assessment Reports		X	
#####.	04.	00.	00	**PROJECT DOCUMENTATION**			
#####.	04.	01.	00	Presentations to K-H/DOE			
#####.	04.	02.	00	DOE/K-H Correspondence		X	
#####.	04.	03.	00	External Correspondence (EPA/CDPHE/Stakeholders)	X	X	
#####.	04.	04.	00	Project Schedules			
#####.	04.	05.	00	Project Organization			
#####.	04.	05.	01	Transmittal of Project Organization to CDPHE			
#####.	04.	06.	00	Project Decision Letters			
#####.	04.	06.	01	Reduction of Access Letter		X	
#####.	04.	06.	02	Notification Letter to DOE for readiness for ERE		X	
#####.	04.	06.	03	Notification to State prior to Demolition	X	X	
#####.	04.	06.	04	ERE Approval letter from DOE		X	
#####.	04.	07.	00	Status Briefings			
#####.	04.	08.	00	Project Planning			
#####.	04.	09.	00	Decommissioning Final Closeout Report	X	X	
#####.	04.	09.	01	Pre-Demolition Survey	X	X	
#####.	04.	09.	02	Post-Demolition Survey	X	X	
#####.	04.	10.	00	As-builts		X	
#####.	04.	11.	00	Building Photographs		X	
#####.	05.	00.	00	**COMPLIANCE PLANS**			

Building Number/Complex Number/Project Number	Major Category	Sub-Category	Individual Category	DESCRIPTION	AR	QA Record*	File Completed Date/Init
#####.	05.	01.	00	Project Management Plan		X	
#####.	05.	01.	01	Comments			
#####.	05.	01.	02	Revisions			
#####.	05.	02.	00	Scoping Level Characterization Plan		X	
#####.	05.	02.	01	Scoping Level Checklists		X	
#####.	05.	03.	00	Scoping Level Characterization Report		X	
#####.	05.	03.	01	Joint Scoping Meeting Presentation			
#####.	05.	03.	02	Joint Scoping Meeting Minutes	X	X	
#####.	05.	04.	00	Reconnaissance Level Characterization Package	X	X	
#####.	05.	04.	01	Comments/Background			
#####.	05.	05.	00	Reconnaissance Level Characterization Report	X	X	
#####.	05.	05.	01	Comments/Background			
#####.	05.	06.	00	RCRA Closure Description Document	X	X	
#####.	05.	06.	01	RCRA Closure Certification		X	
#####.	05.	07.	00	Security Checklist/Plan		X	
#####.	05.	07.	01	Decision Document		X	
#####.	05.	07.	02	Internal Comments		X	
#####.	05.	07.	03	Responsiveness Summary	X	X	
#####.	05.	07.	04	Final Submittal	X	X	
#####.	05.	08.	00	Chemical Inventory Report		X	
#####.	05.	08.	01	Chemical Data Packages		X	
#####.	05.	09.	00	Surface Water/Groundwater Monitoring Determination		X	
#####.	05.	10.	00	Annual Emissions Results		X	
#####.	05.	10.	01	Air Pollutant Emission Notification (APEN)	X	X	
#####.	05.	11.	00	Environmental Checklist		X	
#####.	05.	12.	00	Migratory Bird Clearance Request		X	
#####.	06.	00.	00	**AUTHORIZATION BASIS**			
#####.	06.	01.	00	Auditable Safety Assessment or Authorization Basis		X	
#####.	06.	01.	01	Comments/History			
#####.	06.	01.	02	Revisions		X	
#####.	06.	02.	00	AB/ASA Implementation Plan		X	
#####.	06.	03.	00	Safety Evaluation Screens		X	
#####.	06.	04.	00	Unreviewed Safety Questions		X	
#####.	06.	05.	00	Justification for Continued Operations		X	

Building Number/Complex Number/Project Number	Major Category	Sub-Category	Individual Category	DESCRIPTION	AR	QA Record*	File Completed Date/Init
#####.	07.	00.	00	**PROPERTY MANAGEMENT**			
#####.	07.	01.	00	4300.1C Checklist		X	
#####.	07.	02.	00	Material Transfer and Disposal Form(s)		X	
#####.	07.	03.	00	Transfer of Cluster from Operations to Decommissioning		X	
#####.	08.	00.	00	**OPERATIONS**			
#####.	08.	01.	00	Project Performance Report(s)			
#####.	08.	02.	00	Construction Redlines		X	
#####.	08.	03.	00	Activity Screening Form(s)			
#####.	08.	04.	00	Daily Reports			
#####.	08.	05.	00	Project Final Closeout Form		X	
#####.	08.	06.	00	Project Acceptance & Transfer		X	
#####.	09.	00.	00	**PROCUREMENT**			
#####.	09.	01.	00	Purchase Orders/Requisitions		X	
#####.	09.	01.	01	Credit Card Purchases			
#####.	09.	01.	02	Credit Card Reconciliation Sheets			
#####.	09.	02.	00	Bid Evaluations			
#####.	09.	02.	01	Estimates			
#####.	09.	03.	00	Procurement Report			
#####.	09.	04.	00	Davis-Bacon Submittal and Determination			
#####.	09.	05.	00	Subcontractor Performance Evaluation		X	
#####.	09.	06.	00	Partial and Complete Subcontractor Close-out Form			
#####.	10.	00.	00	**BUDGET/COST/ESTIMATING**			
#####.	10.	01.	00	Weekly Estimating Sheets			
#####.	10.	02.	00	Closure Projects Budget Baseline Update			
#####.	10.	03.	00	Budget			
#####.	10.	03.	01	File by Fiscal year			
#####.	10.	04.	00	Accrual Report			
#####.	10.	05.	00	Baseline Change Proposal(s)			
#####.	10.	06.	00	Monthly MCS Reports/Variances			
#####.	10.	07.	00	Performance Measure Completion Report			
#####.	10.	08.	00	Overtime Requirements/Requests			
#####.	11.	00.	00	**SUBCONTRACTOR PLANNING DOCUMENTATION**			
#####.	11.	01.	00	Asbestos Abatement Contract		X	

APPENDIX A-1 - GENERIC DECOMMISSIONING PROJECT FILE INDEX AND COMPLETION CHECKLIST

Building Number/Complex Number/Project Number	Major Category	Sub-Category	Individual Category	DESCRIPTION	AR	QA Record*	File Completed Date/Init
#####.	11.	01.	01	Asbestos Abatement MOU		X	
#####.	11.	01.	02	Asbestos Abatement SOW		X	
#####.	11.	02.	00	Demolition			
#####.	11.	02.	01	Demolition SOW		X	
#####.	11.	02.	01.	01 Background and Comment Resolution			
#####.	11.	02.	02.	Subcontractor Project Documentation			
#####.	11.	02.	02.	01 Subcontractor Health and Safety Program Plan			
#####.	11.	02.	02.	02 Subcontractor Quality Assurance Program Plan			
#####.	11.	02.	02.	03 Spill Control Plan		X	
#####.	11.	02.	02.	04 Readiness Certificate Memorandum		X	
#####.	11.	02.	02.	05 Plan of Action		X	
#####.	11.	02.	02.	06 Demolition Plan and notification	X	X	
#####.	11.	02.	02.	07 Demolition Closeout Report		X	
#####.	11.	02.	02.	08 Dust Control Plan		X	
#####.	11.	02.	02.	09 Communication and Requests		X	
#####.	11.	02.	02.	10 Status Meetings			
#####.	11.	02.	02.	11 Field Changes		X	
#####.	11.	02.	02.	12 Project Schedules			
#####.	11.	02.	02.	13 Miscellaneous		X	
#####.	12.	00.	00	TRAINING			
#####.	12.	01.	00	Training Matrix		X	
#####.	12.	02.	00	Qualification Packages		X	
#####.	12.	03.	00	Individual Field Training Records		X	
#####.	12.	03.	01	Personnel not with project		X	
#####.	12.	03.	02	Subcontractor personnel		X	
#####.	13.	00.	00	WASTE MANAGEMENT			
#####.	13.	01.	00	WSRIC/WGI		X	
#####.	13.	02.	00	Waste Travelers for Packaging		X	
#####.	13.	03.	00	Nonconformance Reports		X	
#####.	14.	00.	00	ENGINEERING			
#####.	14.	01.	00	Integrated Work Control Program Work Packages		X	

Project Files Complete: _____

APPENDIX A-2
Project Deliverables Matrix

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
1	All	All	DD	Project Management Plan (PMP)	FDPM-Section 2.3.1	FDPM-Section 2.3.1	Information	Information		Required for the nine Project Baseline Descriptions. May be prepared for individual buildings/clusters as desired by the project manager.
2	All	All	DD	Project Performance Report	SP&I Standards	FDPM-Section 2.3.6	N/A	N/A		Prepared monthly by K-H PM
3	All	All	DD	Accrual Report	SP&I Standards	FDPM-Section 2.3.6	N/A	N/A		Prepared monthly by K-H PM
6	All	All	OS&IH	Integrated Job Hazard Analysis (AHA, ASA, JHA, JSA, etc.)	DOE O 440.1, OSHA	HSP, IWCP, OS&IH Manual	Information	N/A		
7	I		DD	Reduction of Access Letter	N/A	N/A	Approval	N/A		Letter from K-H to DOE, requesting a modification of security, applies to buildings in the PA that want unescorted access. Requires government furnished service and item review.
8	I	All	DD	Project Team Organization Structure and responsibilities: Letter to CDPHE	DPP, Sections 1.1.1 and 3.3.7.1	DPP	Notification	Notification		Information exchange of the key points of contact
9	I	All	DD	Update Closure Projects Budget Baseline	BMI-INST-004, Baseline Change Control	FDPM-Section 3.3.1.2	N/A	N/A		
12	I	All	DD	Scoping-level Characterization Plan	DDCP	DDCP	N/A	N/A		Plan is recommended, but not required
13	I	All	DD	Scoping-level Characterization Report	DDCP	DDCP	N/A	N/A		Report is recommended, but not required
14	I	All	DD	Joint Scoping Meeting Minutes/Disposition	FDPM-Section 3.3.7	1-11000-ADM-003, Correspondence Control Program	Concur	Concur	X	
15	I	All	DD	Scoping Level Checklists	DDCP	DDCP	N/A	N/A		Checklists are recommended, but not required
16	I	All	DD	Joint Scoping Meeting Presentation	DPP-Section 3.3.1	FDPM-Section 3.3.7	Information	Information		Presentation is recommended, but not required
17	I	All	ESS	Environmental Checklist	DOE-STD-3006-95	1-25000-EPR-NEPA.001, Implementation of NEPA Documentation	Information	N/A		Prepared by the project and reviewed by the ESS group. Additional documentation may result from the checklist, but it will be developed by the ESS group.
18	I	All	ESS	Migratory Bird Clearance Request	Migratory Bird Treaty Act	N/A	N/A	N/A		Not a document, an evaluation will be made by Ecology and NEPA to determine if nests need to be removed prior to initiating work, clearance is good for two weeks
19	I		Env	Chemical Data Package	Chemical Compliance Order	Acceptance Criteria	N/A	N/A		Required as chemicals are found or are no longer needed. Package needs to contain MSDS, chemical name, and sample results to meet the acceptance criteria

Phase of Project: I = Scoping; II = Planning and Engineering; III = Execution; and IV = Close-out
*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

Document.	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
20	I	All	Env	Chemical Inventory Report	OSHA, RCRA	Hazardous Communications Program	Information	Information		All chemicals in use and/or on-site must be maintained on a list
21	I		Env.	Air/Soil/Ecology/Surface Water/Groundwater Monitoring Determination	RFCA, Paragraph 267	N/A	Information	Information		An assessment will need to be made by Environmental to determine if monitoring will be necessary for the project per the Integrated Monitoring Plan
22	I	All	P&I	Baseline Change Proposal(s)	1-R97-F&A-MCS-001, Management and Control	P&I Standard	Approval	N/A		Requires government furnished service and item review.
23	I	All	P&I	Monthly MCS Reports/VARS	1-R97-F&A-MCS-001, Management and Control	P&I Standard	Information	N/A		
24	I	All	P&I	Monthly Project Summary Report (PSR)	1-R97-F&A-MCS-001, Management and Control	P&I Standard	Information	N/A		
26	I	All	PU&D	Transfer of Cluster from Operations to Decommissioning	41 CFR 109	1-MAN-009-PMM, Real Property Management, Ch. 9	Information	Information		Present Landlord and DD PM meet with property management to complete hazards assessment and facility status
27	I	II, III	Reg	Establish Administrative Record	RFCA, Para. 283, 284 and 285; CERCLA, 40CFR300.800 et.seq.	1-F78-ER-ARP.001, CERCLA Administrative Record	Approval	Approval	X	Requires government furnished service and item review.
28	II	All	Contracts	Davis-Bacon Submittal & Determination	Davis Bacon Act	1-90000-ADM-9.05, Davis Bacon Process, FDPM-Section 4.3.1.3	N/A	N/A		
29	II	All	DD	Reconnaissance Level Characterization Package	Site-wide RLCP	Site-wide RLCP	Information	Information	X	
30	II	All	DD	Reconnaissance Level Characterization Report (RLCR)	RFCA-Paragraph 120(g)	DPP-Section 3.3.2.2, Site-wide RLCP	Approval	Concurrence	X	Requires government furnished service and item review.
31	II	All	Eng	Engineering Assessments and Feasibility Reports	SERM	FDPM-Section 4.3.1.1	N/A	N/A		May or may not be required dependent on the scope and characterization
32	II		Env	RCRA Closure Description Document	RFETS Part B Permit; RFCA, Attachment 10	RFETS Part B Permit; RFCA, Attachment 10	Approval	Approval	X	Only required if there are RCRA units and a plan may already be in place. If not, a CDD can be prepared with assistance from Environmental or the CDD can be incorporated into the Decision Document, goes into AR only if RCRA closure addressed in Decision D. Requires government furnished service and item review.
33	II		OS&IH	Asbestos Abatement Plan	DOE O 440.1, OSHA	OS&IH Manual, Contract Specifications	N/A	N/A		Plan includes characterization process and may be included in RLCP, only required when asbestos may be present

Phase of Project: I = Scoping; II = Planning and Engineering; III = Execution; and IV = Close-out
*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
34	II		OS&IH	Chronic Beryllium Disease Prevention Plan	DOE N 440.1, 10 CFR 850	OS&IH Manual, Contract Specifications	N/A	N/A		Plan only needs to be prepared if Beryllium may be present
35	II	All	OS&IH	Subcontractor Health & Safety Program	DOE O 440.1, OSHA	Contract Specifications	N/A	N/A		Prior to awarding a subcontract the HS Dept. must review and approve the subcontractor's H&S Program. If a sub is chosen from the approved subcontractors list, the program has been reviewed
36	II	All	OS&IH	Project Specific Health and Safety Plan	DOE O 440.1, OSHA	OS&IH Manual, Contract Specification 01010	N/A	N/A		Not necessarily a separate document can be a section or attachment to PMP.
37	II		OS&IH	Spill Control Plan	DOE O 440.1, OSHA	Contract Documentation	Information	Approval		Developed by the subcontractor if its required by the scope
38	II	All	PU&D	4300.1C Checklist	DOE Order 4300.1C	1-MAN-009-PMM, Property Management Manual	N/A	N/A		Completion of the checklist should be coordinated with real property manager
39	II	All	QA	Subcontractor Quality Program	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 1	1-W36-ARP-111, Acquisition Procedures for Requisitioning Services and Commodities	N/A	N/A		Scope of the plan will depend on the services rendered and the specifics of the subcontracts.
40	II		Crit. Safety	Criticality Analysis Safety Assessment	DOE O 420.1	Nuclear Criticality Safety Manual	N/A	N/A		Only required if task involves fissile material
41	II	All	Security	Security Checklist/Plan	DOE O 470.1	1-MAN-026, Security Manual	N/A	N/A		Complete Part I of checklist in Appendix 4 of 2-L92-COEM-PMG-302. A response to Part II will be completed within one month which may require the development of a Security Plan
42	II	II	DD	Decision Document	RFCA	DPP-Section 1.1.4, 1.1.5, 3.3.6.2, 3.3.7.1, FDPM-Section 5.3.5, PMP	Approval	Approval	X	Appendices D-1 and D-3 of FDPM have guidance, A PAM or IM/IRA for Type II and a DOP for Type III. Requires government furnished service and item review.
43	II	II	DD	Decision Document Responsiveness Summary	RFCA, DPP – Section 3.3.7.2	FDPM – Section 5.3.5	Approval	Approval	X	Summary will contain comments/responses to public comments received during the public comment period (may include Type II in a DOP). State/EPA/DOE et. al. comments will be incorporated as the document is prepared in a coordinated fashion. Requires government furnished service and item review.
44	II	All	DD	Training Matrix	DOE O 5480.20A; Training Program Manual; QAPD, Crit. 2	DPP Section 1.1.1 and 3.3.7.1, FDPM	N/A	N/A		Each building should have an established matrix which could be modified/updated for use by the decommissioning project team
45	II	All	Eng	Engineering Design Packages	SERM	DES 210	N/A	N/A		

Phase of Project: I = Scoping; II = Planning and Engineering; III = Execution; and IV = Close-out
*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
46	II	All	Eng	Work control documents	DOE O 5700.6C, 4330.4B, 5480.19, P450.4 & C420.1	IWCP Manual FDPM-Section 5.3.1.1	N/A	Information		
47	II		Nuc Saf	Safety Evaluation Screens (SES)/ Unreviewed Safety Questions (USQs)	1-MAN-018-NSM, Nuclear Safety Manual; MAN-066-COOP, COOP	1-C11-NSM-04.05, Unreviewed Safety Question Determination; FDPM-Section 5.3.4	N/A	N/A		A SES can be done for less complicated issues. An USQ be prepared in conjunction with JCO in lieu of modifying the AB
48	II		Nuc. Saf.	Auditable Safety Assessments	DOE O 5481.1B	MAN-066-COOP; FDPM-Section 5.3.4	Information	Information		Document will need to be prepared for nonnuclear facilities
49	II		Nuc. Saf.	Authorization Basis for Decommissioning	DOE O 5480.23	MAN-066-COOP; FDPM-Section 5.3.4	Approval	Information		The JCO/USQ process can be used for each activity instead of modifying the AB Requires government furnished service and item review.
50	II		Nuc. Saf.	AB/ASA Implementation Plan	DOE O 5481.1B (non-nuc.) & 5480.23 (nuc)	MAN-066-COOP; FDPM-Section 5.3.4	Information-Nuclear	N/A		Document implementation of the AB changes or the ASA prepared at the discretion of the Facility Manager
51	II		Nuc. Saf.	Justification for Continued Operation (JCO)	1-MAN-018-NSM, Nuclear Safety Manual; MAN-066-COOP, COOP	FDPM-Section 5.3.4	N/A	N/A		Can be used in conjunction with USQD instead of revising AB
52	II, III		Eng	Engineering Change Request (ECR)	SERM	DES 210, IWCP Manual	N/A	N/A		
53	III	II	CPEI	Readiness Certificate Memorandum	1-MAN-040-RDM Readiness Determination Manual	FDPM-Section 6.3.1	Information	N/A		
54	III	II	CPEI	Plan of Action	DOE O 3006-95 and 425.1	1-MAN-040-RDM Readiness Determination Manual	Information	N/A		Recommended for all and required for types II and III
55	III	All	CSS	Inspection Reports/Acceptance Criteria	1-PRO-072-001, Inspection and Acceptance Test Process	IWCP Manual	N/A	N/A		Each subcontractor may also have established inspection requirements contained within their programs; inspections are documented in work control documents
56	III	All	DD	Daily Reports	FDPM-Section 6.3.6		N/A	N/A		Appendix C-1 of FDPM has template, level-of-effort task
57	III		DD	Demolition Plan	OSHA	N/A	Information	Notification	X	
60	III	II	DD	Pre-Demolition Survey Report	DPP Sections 3.3.10 and 3.3.13, CERCLA	DDCP Site-wide PDSP	Approval	Approval	X	Compilation of all surveys generated during building surface dismantlement. Requires government furnished service and item review.
61	III	All	DD	Demolition Notification to State	CAQCC Reg. No. 8, Section III.B.1.ai		Information	Information	X	Required for every demolition project

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*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
62	III	All	DD	Progress Photos	FDPM-Section 6.3.6		N/A	N/A		Level-of-effort task, close-out submittal; Photography request will need to be completed. Appendix C-3 has format.
64	III		DD	Dust Control Plan	CAQCC Regulation 1	N/A	Information	Approval		
67	III	II	DOE	Technical Description Sheets	1-MAN-040-RDM, Readiness Determination Manual	FDPM-Section 6.3.1	Review	N/A		
71	III		Env	RCRA Closure Certification	RFETS Part B Permit; RFCA, Attachment 10	RFETS Part B Permit; RFCA, Attachment 10	Approval	Information		Only required if the closure action is not removal and some portion of the RCRA unit remains in place after decommissioning. Requires government furnished service and item review.
72	III		Env.	Air Pollutant Emission Notification (APEN)	CAQCC Regulation 3	N/A	N/A	Information	X	Needs to be submitted to the State if 2,000 lbs. of dust/VOC emission will be exceeded in a single event
73	III		Env.	Monitoring Data, annual emissions results	40 CFR 61, Subpart H; CAQCC Regulation 8	N/A	Information	Information		Submitted annually for incorporation into the RFETS Monitoring Report
74	III		OS&IH	Asbestos Notification	DOE O 440.1, OSHA	OS&IH Manual, Contract Specifications	Information			The requirement is dependent upon the amount of asbestos involved in the decommissioning
75	III		OS&IH	Asbestos Characterization Report	DOE O 440.1, OSHA	OS&IH Manual, Contract Specifications	N/A	N/A		Plan is prepared after asbestos abatement, only required when asbestos is present
76	III		OS&IH	Lead Abatement Characterization Plan and Report	DOE O 440.1, OSHA	OS&IH Manual, Contract Specification 01010	N/A	N/A		May be included in RLCR, plan not required if regulatory limits are not exceeded
77	III		OS&IH	Soil Disturbance Permit and Surveys	DOE O 440.1, OSHA		N/A	N/A		
78	III	All	PU&D	Material Transfer and Disposal Form	41 CFR 109	1-MAN-009-PMM, Property Management Manual	N/A	N/A		The forms will be provided by PU&D and will need to be completed and submitted for any personal property remaining in the building
79	III	All	QA	Receiving Inspections	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 8	4-J44-RC&I-6600	N/A	N/A		Each subcontractor may also have established inspection requirements contained within their programs; inspections are documented in the work control documents
80	III	All	QA	Nonconformance Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 3, MAN-091-NCR	PRO-U76-WC-4030, Control of Waste Nonconformances; MAN-091-NCR, Control of Nonconforming Items	N/A	N/A		Prepared on an as-needed basis during execution for hardware nonconformances; each subcontractor may also have procedures and programs governing NCRs
81	III	All	QA	Calibration Records	10 CFR 830.120, DOE 5700.6C, QAPD, Crit. 8	1-I97-ADM-12.01, Control of Measuring and Testing Equipment	N/A	N/A		

Phase of Project: I = Scoping; II = Planning and Engineering; III = Execution; and IV = Close-out
*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

Document	Phase	Building Application	Owner Organizations	Deliverable	Driving Document	Implementing Document	DOE Interface	LRA Interface*	Admin. Record	Comments
82	III	All	QA	Corrective Action Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 3	1-MAN-012-SCARM, Site Corrective Action Requirements Manual	N/A	N/A		Will need to be prepared to document programmatic deficiencies, if required
83	III	All	QA	Audit Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 10	1-MAN-013-SIOM, Site Integrated Oversight Manual	N/A	N/A		Process/procedure/scope of this requirement will depend upon the subcontractor audit program
84	III	All	QA	Management Assessment Reports	10 CFR 830.120, DOE O 5700.6C, QAPD, Crit. 9	1-W37-IA-002, Integrated Planning and Scheduling of Management Assessments	N/A	N/A		Process and procedure for management assessments should be established by the individual subcontractor program
86	IV	II	DD	Post-Demolition Survey	CERCLA	DPP Sections 3.3.10 and 3.3.13	Approval	Approval	X	Requires government furnished service and item review.
87	IV	All	DD	Project Final Closeout Form (FPCO)		FDPM, Appendix E-2	N/A	N/A		Form is in Appendix E of the FDPM
90	IV	All	DD	Decommissioning Final Closeout Report	RFCA, para. 118	DPP-Section 3.1 and 3.3.11 FDPM-Section 7.3.3.7	Approval	Approval	X	Prepared for all facility disposition activities upon completion of work, incorporates subcontractor Demolition Closeout Report. Requires government furnished service and item review.
91	IV	All	DD	Partial and Complete Subcontract Close-out Form	FDPM-Section 7.3.3.1	FDPM-Appendix E-1	N/A	N/A		Form is in Appendix E-1 of the FDPM
92	IV	All	P&I	Accounting Closeout (ACO)	1-R97-F&A-MCS-001, Management and Control	P&I Standard 001	Information	N/A		P&I completes form with input from decommissioning project
93	IV	All	QA	Lessons Learned Summary Report	10 CFR 830.120; DOE O 5700.6C; QAPD-Crit. 3	1-MAN-017-LLGI-RM, Site Lessons Learned Manual; FDPM-Section 7.3.3.6	N/A	N/A		Only required if incidents occur during project execution

Phase of Project: I = Scoping; II = Planning and Engineering; III = Execution; and IV = Close-out
*LRA for Industrial Area is State with EPA as SRA and LRA for Buffer Zone is EPA with State as SRA

APPENDIX B-1
Sample Type 1 Facility Checklist

TYPE 1 FACILITY:_____

CURRENT LANDLORD:_____ DATE OF COMPLETION:_____

ITEM	YES	NO
Does the facility contain radiological postings?		
Does the facility contain chemical postings?		
Are there any installed hazards?		
Do the historical surveys (radiological and chemical) indicate that the facility is clean?		
Are there RCRA units within the facility		
Is there a written history of the building available?		
Is there any equipment/furniture left in the facility?		
Is there a future mission identified for the facility?		
Will the facility be left unsecured after it is vacated?		

If any answer to any of the above questions is "Yes", complete the following questions and complete the "graded" PMP in accordance with Section 2.

Note: An answer of "Yes" to any question, specifically one dealing with hazards, may indicate the facility is not a Type 1 Facility. Check with the Decommissioning Program.

If the answer to all questions is "No", complete the "graded" PMP in accordance with Section 2.

1. List the Radiological Hazards, location, and quantity:

_____

_____

_____

2. List the Chemical Hazards, location, and quantity:

_____

_____

_____

3. List the Physical Hazards:

_____

_____

_____

RFCA DECISION DOCUMENT PREPARATION GUIDANCE

The DOP will be prepared and approved in accordance with the RFCA IM/IRA approval process. The DOP will contain sufficient information so the regulators can be satisfied that the project can proceed compliantly, with a high probability of success. Support buildings associated with a major project ***may*** be included in its DOP if they would be managed in the same project. A graded approach will be followed to determine the level of detail in the table of contents for PAMs. Using a graded approach, a DOP or IM/IRA at a minimum will contain the following information.

EXECUTIVE SUMMARY

1. INTRODUCTION
   - Include purpose of document and scope. Scope will include a description of the facility after decommissioning activities are completed, e.g., buildings to slab.
   - Include brief justification explaining consistency with ISB, or if not, logic for doing, e.g., reduced risk, costs, etc. (Explanation for why it is important to do work and the relationship of the project to long-term remedial objectives).

2. FACILITY (BUILDING/CLUSTER) DESCRIPTION
   - A physical description of building area; a brief operational history, including known releases and fires (based, where the information exists, on the historical release record); identification of RCRA units and CERCLA IHSS's; summary of the RLC Report findings.
   - The DOP will describe the expected condition of the building at the beginning of decommissioning.

3. ALTERNATIVES ANALYSIS & SELECTION
   Include an alternatives analysis and an impact analysis.

4. PROJECT APPROACH
   - Description of project including: a description of project activities and work and emission controls; performance standards; any included RCRA closure activities; any separate environmental management or compliance approvals needed; and a description of the on-going plan for facility characterization.
     - Include: Identification of Hazards from the RLCR and how they will be addressed (Recommend use of tables summarizing data).
   - Identification of activities to address hazards, including Work/Environmental/Spill(emphasize)/ Effluent controls.
     - Identify Decontamination approach.
     - Identify need for a Final Radiation Survey Plan and a Decontamination Plan.
     - Identify monitoring requirements.
     - Identify cleanup levels.
   - Discuss Authorization Basis (reference documents that identify surveillance and equipment maintenance requirements) and Work Authorization

NOTE: Prior to proceeding with decommissioning, a management review of the project's infrastructure, procedures and personnel will be completed by DOE, the LRA and the IMC; such review, to verify that the conditions exist to support the activities safely, ***may*** result in changes to the project as described in this document.

4.0 HEALTH AND SAFETY

Include a description of the health and safety issues (worker and environmental)
Include ISM discussion and how safety is built into approach.
Address emergency response
Summary of hazards from Project Approach above

5.0 WASTE MANAGEMENT

Include a summary of the waste management issues, including those related to disposal.
Identify waste quantities to be generated (TRU, LLW, and sanitary), where it will be staged, and ultimate disposition plans. Discuss unknowns and need for flexibility and possible change due to uncertainties with final destinations. (Waste Process Flow Chart recommended).
Duration of storage or staging.

6.0 COMPLIANCE W ARARS

Includes list of applicable laws, orders, regulations, and CWA or CAA permit requirements; Chemical-, Action- and Location Specific and To-Be-Considered Requirements and Considerations; and RFCA building cleanup criteria and standards.

7.0 ENVIRONMENTAL CONSEQUENCES OF THE ACTION

Include description of environmental, socioeconomic and cumulative impacts as a result of the project to: geology and soils, air quality, water quality, human health, plants and animals, historic resources, noise levels and the local economy; mitigation measures; unavoidable adverse effects; short-term uses in effect during decommissioning and long-term productivity after the actions are complete, and irreversible and irretrievable commitments of resources.
Address NEPA and relative impact on human health, worker safety, and the environment.
Address how the requirements have been met for compliance with the National Historic Preservation Act and the programmatic agreement with the Colorado State Historic Preservation Office.[1]

8.0 QA/QC

Include a general description of the quality assurance and control issues.
Include the training process to assure worker training is adequate, include a matrix of training requirements specific to the decommissioning project.

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[1] Sixty-four facilities of the former Rocky Flats Plant have been listed in the National Register of Historic Places as an historic district. A Programmatic Agreement with the Colorado State Historic Preservation Officer requires that the facilities be documented using the Historic American Engineering Record (HAER) format before the facilities are significantly altered or demolished. The documentation is scheduled for completion in March, 1998. The HAER documentation packages are submitted to the National Park Service for approval. Acceptance of the entire documentation package by the National Park Service is expected in the summer of 1998.

9.0 IMPLEMENTATION SCHEDULE

- Include a schedule with level of detail addressing room by room (or set) logic and activities (*may* not need to be to the level identifying individual glovebox, tank or equipment item removal for equipment or sets whose remediation is not complex). This schedule will include anticipated document review times by the LRA.

NOTE: This information will be supplied to add clarity to the decision document and to identify the general planned schedule if full funding is available. The schedule is not an enforceable part of the document, and DOE or its contractors may deviate from it without penalty and without having to notify or obtain the approval of the LRA in advance.

10.0 Project Organization

Includes organization chart of project team, and a description of how project fits into larger facility disposition effort.

NOTE: This information will be supplied to add clarity to the decision document and to identify reporting relationships and responsibilities. The organizational structure is not an enforceable part of the document and DOE or its contractors may deviate from the organization without penalty and without having to notify or obtain the approval of the LRA in advance.

11.0 Comments and Comment Responsiveness Summary

12.0 References

Include references to other documents used as information sources in the DOP, such as, RFCA, DPP, any RSOPs that would be used, RLC Report, project specific health and safety plan.

APPENDIX C-2
RSOP for Component Removal, Size Reduction, and Decontamination Activities Checklist

Project scope:			
Facility description:			
Description of planned activity(ies):			
Facility/rooms/sets/areas involved:			
Is RCRA unit closure(s) part of the planned activity? *If RCRA units are included, attach unit specific information sheets and drawings*			**Yes** / **No**
Attach checklists from Appendix A of the RSOP. *Complete checklists by room/set/area/facility, as appropriate*		**Component Removal/Size Reduction**	
		Decontamination	
RLCR Status		**RLCR complete and concurrence received:**	
		RLCR initiated but incomplete; concurrence anticipated:	
		RLC has not been initiated, and is scheduled for initiation on:	
If RLCR is not complete or initiated, what data will be used to plan the work activities?			
Activity requires modification to the ARARs listed in the RSOP.			**Yes,** *attach to letter*
			No
Attach Administrative Record file requirements for the activity.			
Point of contact for each facility/activity:			
Duration of work activities:		**Anticipated work start:**	
Attach schedule for each facility or activity for information purposes.			
Does the activity involve removing contaminated portions of the building shell? *Include a description of the activity, contamination levels and controls*			**Yes,** *LRA consultation and concurrence required*
			No
Are there deviations/exceptions to the RSOP for the proposed activity(ies)?			**Yes** / **No**
Provide an explanation of deviation/exception to the RSOP: *Check the appropriate resulting action box below*			
	Additional RFCA decision document required (PAM – IM/IRA)		
	Major modification to RSOP		**Field change to RSOP**
	Minor modification to RSOP		**LRA consultation**
Activity(ies) will result in the following waste types			**Process waste**
			Remediation waste
	TRU	**LLW**	**LLMW**	**Haz.**	**Sanitary**	**Other:**
LRA Notification Review Time		**14 days, no RCRA unit closure involved**	
		30 days, RCRA unit closure involved	

Decommissioning/Environmental Restoration Interface Guidelines

The following information and guidelines are provided to support final Site closure, and to facilitate coordination between Decommissioning and Environmental Restoration (ER) activities. These guidelines are provided for information only and do not replace existing procedures and decision documents.

This guidance is provided to assist with the planning process, however, the planning process for each decommissioning project will be much more complex. Therefore, each project includes an ER representative that is involved during planning to facilitate resolution of issues and to achieve Site Closure in the most cost effective manner.

Decommissioning activities will be coordinated with ER activities to achieve an integrated process that minimizes risk to workers and the environment, minimizes the generation of remediation wastes, streamlines technical processes, and reduces costs.

Project coordination objectives are as follows:

- The ER schedule will be integrated with the decommissioning schedule to allow for the planning and initiation of ER characterization activities during facility decommissioning.
- Demolition and ER activities will proceed as a continuous two-phase operation culminating in closeout of associated Individual Hazardous Substance Sites (IHSSs), Potential Areas of Concern (PACs), and under building contamination (UBC) sites.

The general responsibilities of each organization are provided in the following table, and discussed in more detail below.

Responsible Organization	Decommissioning Project	ER
Process Waste Lines	Remove lines within buildings. Drain, take to RCRA stable condition, disconnect and plug open ends of remaining lines. Survey & record termination points	Dispositioning of non-building related process waste lines including old process waste lines.
Utilities	Utilities removed to 3 feet below grade at outer building walls. Plug, survey & record termination points.	Remove utilities less than 3 feet below grade outside of buildings.
Structures	Remove all slabs and structures to 3 feet below grade. Decontaminate or remove all contaminated structures regardless of depth.	Remove contaminated soils associated with structures.
RCRA Unit Closure	Close all RCRA Units within or associated with buildings.	Close Process Waste Lines RCRA units.
Characterization	Characterize building materials for decommissioning and waste dispositioning	Characterize soils including under building contamination, IHSSs and PACs
Backfill, grading and revegetation	Backfill building excavation areas (basements, etc.), grade and seed with temporary groundcover	Backfill areas where soil remediation took place, grade and seed areas with temporary groundcover. Final Site regrading and revegetation.

Erosion and water controls, such as run-on and run-off controls, established for the decommissioning activities are also expected to be protective of the ER activities. If possible, these should be left in-place until remediation is

complete to continue to protect the working areas. Laydown areas and stockpile areas must be coordinated with ER to determine the most appropriate locations.

In the following discussion, existing grade is defined by the ground surface in contact with the exterior of the building. Where grade is uneven, or where dirt is mounded against structures, existing grade is defined as the average grade of the area, excluding the mounded portions. The Land Configuration Design Basis, currently in progress will specify final grade.

Process Waste Lines

Process waste lines, valve vaults, tanks, and other lines are associated with the process waste transfer system (i.e. the new and old process waste lines). The process waste lines are either associated with specific buildings or are part of the existing or previous waste transfer system outside of buildings.

The Building decommissioning project is responsible for rinsing, disconnecting and capping or plugging process waste lines during decommissioning. Process waste lines and associated components within the building will be removed, cut off at the building outside walls, or the nearest junction outside of the building footprint, and the open ends sealed with a watertight permanent seal by decommissioning. Termination point locations will be surveyed using land-based surveys or Global Positioning Systems and recorded. A location map will be provided to ER at project completion and will also be included in the decommissioning project closeout report. ER will disposition lines outside the building footprint.

Building 374 will rinse all components of the new process waste transfer system, leaving them in a RCRA stable configuration. After rinsing, Building 374 will be responsible for disconnecting and capping the lines into the valve vaults and surveying the locations, as above, prior to turning ownership over to RISS. RISS decommissioning will decommissioning the valve vaults and concrete structures associated with the new process waste lines. ER will remediate associated contaminated soils and disposition as required any remaining RCRA stable lines.

The old process waste lines are no longer in use and were left in an unknown state. ER will disposition these lines and associated underground tanks. The appropriate decommissioning Group will remove any above ground tanks. Associated soil contamination is the responsibility of ER.

Utilities

All utilities will be removed to the building foundation to at least three feet below existing grade. In the case of trailers, utilities will be removed to at least three feet below the existing grade, or removed to the nearest junction. Any lines that carried liquid or gas will be considered utilities under the terms of the Contract including sewer, water, process waste lines and steam lines. The telephone, alarm and electrical systems will not be considered utilities for this purpose. KH Contracts Personnel are clarifying the definition of utilities that need to be removed.

In certain instances, it may be more practical and cost effective for the Decommissioning Project to remove the utility to the nearest junction even if the junction is located outside the project area. These should be evaluated by decommissioning and coordinated with ER.

All underground utilities that remain (i.e. three feet below existing grade) will be cut off at the building foundation, or the nearest junction outside of the building, and sealed with a watertight permanent seal. This may require removal in excess of three feet below grade.

The decommissioning project will survey all utility line termination point locations including abandoned piping using land-based surveys or Global Positioning Systems and the data recorded. A map of these locations will be provided to ER and to the Site's Utility Group at project completion and should be included in the decommissioning project closeout report.

Prior to decommissioning, sanitary sewer lines will be flushed with clean water to the main sanitary sewer line. Flushing will consist of high volume, short duration clean water flows of at least five times the total volume of the sewer line being flushed. Hydrolazing may be used when practical to minimize the amount of water used for flushing and to better clean the lines, particularly for large diameter pipes.

After the flushing is completed, the line will be isolated at the sanitary sewer main line outside the building and all openings to the sanitary sewer in the building will be plugged with a watertight seal to prevent accidental releases to the sanitary sewer system. decommissioning will remove sewer lines that are less than three feet below grade within the building perimeter and then will plug any open ends with a watertight permanent seal such as a cement plug. The portions of sewer lines that will be removed during decommissioning do not require flushing.

Structures

Structures include concrete slabs, underground and above ground storage tanks, steam line stanchions, manholes, utility vaults, process waste vaults, vehicle barriers, building foundations, tunnels, and similar items. Decommissioning will remove all structures to a minimum of three feet below the existing grade. In addition, all contaminated structures or portions of structures will be removed regardless of depth. The Decommissioning Project shall be responsible for ensuring that radiological or hazardous contaminants are not released to the environment as a result of the demolition activities.

If left in place, structures or portions of structures must meet unrestricted release criteria (as confirmed by the pre-demolition survey), regardless of depth. Even if structures meet unrestricted release criteria, the Decommissioning Project may choose to remove smaller structures rather than cut them off three feet below grade. All underground utilities associated with these structures will have the same requirements as those associated with buildings. Slab removal over contaminated areas will be closely coordinated with remediation of the underlying contaminated soils. This coordination will involve having ER and decommissioning personnel on the same project team to ensure that as the slab is removed, the area can be characterized and remediated.

Uncontaminated structures that are more than three feet below the existing grade, or as specified by the Land Configuration Design Basis (when completed), may be left in place. The building characterization data, generally provided in the Pre-Demolition Survey Report, will be used to determine which structures meet unrestricted release criteria and can remain in-place. Tunnels, vaults, tanks and similar structures that may provide preferential pathways to surface water will be backfilled by decommissioning using either flowable fill, grout or foam. Soil may be used in certain situations with the concurrence of ER. Recycled concrete backfill will not be used to fill tunnels because the recycled concrete will actively transport groundwater and act as a preferential pathway for groundwater flow.

ER will determine if contaminated soils are associated with these structures. If contaminated soils are associated with these structures, backfill will not take place until after the contaminated soils are removed.

Fence posts and utility poles are not considered structures. These may be cut off at the ground surface or totally removed at the discretion of the Decommissioning Project. Fence posts and utility poles in contaminated areas will be removed unless exceptional circumstances preclude such actions. ER will identify contaminated areas.

Sidewalks will be dispositioned on a case-by-case basis. In general, it is more cost effective to the Site if the decommissioning project removes the sidewalks associated with the project. However, some sidewalks must be kept in-place for safety reasons; therefore, sidewalk removal will be coordinated with ER. ER will disposition roads, sidewalks and parking lots remaining after decommissioning as part of the final Site configuration project.

Tanks

The following matrix shows the responsibilities for dispositioning tanks, including underground storage tanks. This matrix was developed previously and is included here for completeness.

Above Ground Tanks	*Below Ground Direct Buried Tanks*	*Tanks within Structures*	*Tank Structures – separate from other buildings*	*Lines and Valves Between Tanks and Building*
Decom. to drain, flush, stabilize, and isolate tanks.	Decom. to drain, flush, stabilize, and isolate tanks.	Decom. to drain, flush, stabilize, and isolate tanks.	Decommissioning to remove all structures to a minimum of 3 feet below grade	Decommissioning to flush and drain lines and valves.
Decom. to remove tanks.	ER to remove tanks.	Decom. to remove tanks.	Decommissioning to characterize and disposition remaining structure.	Decommissioning to stabilize lines and valves to eliminate potential conduits for contaminant transfer in consultation with ER. (flanged, foamed, grouted, removed, etc.)
			ER to characterize &/or remediate associated soil based on decommissioning findings & process knowledge.	Decommissioning to remove the associated reach rods used for valves.

RCRA Units

As described in the RSOP for Facility Component Removal "All RCRA-regulated units or portions of RCRA-regulated units located within the building will be closed prior to facility demolition. Portions of units located beneath the building slab or outside the building footprint (e.g., valve vaults and underground piping associated with the B374 process waste system) will be taken to a RCRA stable condition during decommissioning and closed in accordance with the ER RSOP or other RFCA decision document, when approved."

Buildings will close all RCRA units within or associated with their buildings. While ER will close the RCRA unit associated with the process waste lines, the buildings are responsible for taking their associated waste lines to a RCRA stable condition. Building 374 is responsible for taking the new process waste line and associated components to a RCRA stable condition prior to transfer to RISS.

Characterization

The decommissioning project is responsible for characterizing all building materials sufficiently for decommissioning and for waste dispositioning. This includes researching building history to determine how the building and slab will be characterized. Decommissioning will share applicable information with ER to facilitate identification, characterization and/or remediation of associated soil contamination.

ER will provide information on the IHSSs and PACs near the building and the potential for UBC that will be used in determining potential impacts to decommissioning activities.

ER is responsible for investigating the UBC. The Industrial Area (IA) Sampling and Analysis Plan is in development and is designed to allow in-process sampling and characterization, i.e., simultaneously with remediation. For most buildings, this investigation will occur concurrently with decommissioning removing the building slab. For buildings with large volumes of anticipated UBC, or where there are schedule constraints, some preliminary sampling through the slab may be performed. Remediation of UBC will immediately follow slab removal. Real-time analytical tools will be used to facilitate characterization and remediation.

Grading and Vegetation

Decommissioning and ER Projects will not make any special effort to conserve the ornamental plantings found on Site. Native trees and vegetation will be retained as practical.

After decommissioning is completed, the Decommissioning Project will backfill and compact soil in accordance with project specifications. Backfill will consist of clean soil or recycled clean concrete as per the Concrete Recycling RSOP. If recycled concrete is used, three feet of clean fill dirt will be required over the concrete to facilitate final grading of the Site.

The area will be roughly graded to match the surrounding topography and seeded to minimize erosion. The ecology group will provide guidelines for revegetation of these areas. In general, the top 9 inches of backfill needs to be native topsoil with a temporary groundcover applied of Canada Bluegrass.

If an ER action is required, the decommissioning group is requested not to backfill the area. ER will backfill, grade and revegetate when the ER action is completed using the above guidelines. As stated above, the ER action will be integrated with the decommissioning actions.

Final Site contours and revegetation will be established as part of the final Site Land Configuration project.

Transition between ER and Decommissioning

Both groups will work closely to ensure the overall scope is completed efficiently and effectively. Within 30 days after completion of the decommissioning portion of the project, ER should get maps showing location and depth of the remaining foundations and other structures, location of abandoned utilities, and areas where high levels of contamination were removed. As indicated previously, during this stage of the project, decommissioning and ER will be part of the same project team.

Extensive efforts have been made over the past year to integrate environmental and decommissioning activities/projects and organizational objects. This integration has included the development of key interface points as a decommissioning project transitions to environmental restoration. These interface points have been documented in both decommissioning and environmental restoration decision documents. Additional integration efforts include weekly meetings with the principal managers of both programs to discuss upcoming activities and potential issues. Finally, an environmental restoration representative has been assigned to coordinate the integration with the individual decommissioning projects. This individual attends periodic status meetings with the decommissioning projects to ensure that coordination occurs during the preparation of planning documents and project scoping with the agencies and stakeholders.

APPENDIX E-1
Daily Report

Status Report

Weather	AM	PM	
Sunny			
Cloudy			
Rain			
Snow			
Wind			
<40°F			
40° - 60°F			
60° - 80°F			
>80°F			

Workforce		NO.	LT*
Super			
Foreman			
Carpenter			
Carpet Layer			
Cement Finisher			
Dry Wall			
Electrician			
Glazer			
Instrument			
Insulator			
Iron Worker			
Laborer			
Mason			
Millwright			
Oper. Engineer			
Painter			
Pipefitter			
Roofer			
Sheet Metal			
Teamster			
Tile Setter			
Total			
Equipment			
*LOST TIME HOURS			

Job Title: _____

Contract/Task #: _____ Authorization #: _____

Type of Funding: _____ Work Order (IWCP)#: _____

Type of Subcontract: _____ Subcontractor: _____

Scheduled Start: % Scheduled to be Completed:

Schedule Completion: _____ % Actually Completed: _____

Revised Completion: _____ Nonconformances: _____

Job Description:

Buildings/Areas:

Progress:

Planned Activities:

Support Requirements:

Problems/Resolutions

Cost Information:

Subcontract Value$: _____

Total billed $: _____ as of: _____

Changes to Subcontract:

Total Cost of Changes $: _____

Total Number of Changes: _____

Submittals Outstanding:

Safety Evaluation: Daily: ____ Weekly: ____ Monthly: ____

Project Team:

Project Manager: _____ Field Engineer: _____

Const. Superintendent: _____ Project Engineer: _____

Construction Manager:

Updated by: _____ Date: _____

Signature: Date:

Use the revese side of this form for additional comments

APPENDIX E-2
Progress Photographs

PHOTO

FILM ROLL NUMBER 49870 (Film roll number as shown on back of photo)
DESCRIPTION - ROCKY FLATS FIELD OFFICE (Typed exactly as shown)
BUILDING T886D MODULAR LABORATORY UTILITIES (Name of job)
SUBCONTRACTOR - ROY F. WESTON (Name of Subcontractor)
K-H Project Manager - T.J Wirth (Name of Kaiser-Hill Project Manger)
NCA20005 (Job Number)
DATE 7/14/97 (Date photos taken)
#1 LOOKING NORTHWEST AT COMPLETED PIER FOUNDATIONS FOR MODULAR (Negative number shown on back of photo and description of photo)

APPENDIX F-1
Partial and Complete Subcontract Close-out Form *(Sheet 1 of 2)*

WBS #:_____ **B&R #:** _____ **PRN #:** _____ **Core Charge #:**_____	**Title/Description:** Expense, Capital, Demolition

Note: If this is a demolition Project, provide a list of equipment, systems & structures removed or demolished, with their respective inventory numbers and values.

Section I: Partial Subcontract Closure:
*This section provides for the capitalization of equipment/property that has received a Beneficial Occupancy Notice, which is closed-out. This **DOES NOT** close the Charge Number of Subcontract. P.O. = Purchase Order*

CHARGE #	P.O. #/ TASK #/LINE #	%	TOTAL $ PER CHARGE	CHARGE #	P.O. #/ TASK #/LINE #	%	TOTAL $ PER CHARGE

Section II: Subcontract and/or Charge Number Closure:
This section provides for the total closure of subcontract(s) at the task level and the initiation of charge number closeout after all contracts have achieved 100% completion. P.O. = Purchase Order

CHARGE #	Other subcontracts Still Open? Y/N	P.O. #/ TASK #/LINE #	P.O. #/ TASK #/LINE #	P.O. #/ TASK #/LINE #

If Yes, closeout only the subcontract(s) as listed above. If NO, closeout the applicable subcontract(s) task # referenced above and initiate financial closeout of the charge number(s) as listed. These Charge Numbers will not have any labor hours charged against them after ton of the following:

90 days from the date this notice is submitted to procurement, or

after _____ (date)

Attach a list of equipment, systems & structures with their respective inventory numbers, values and a copy of the Beneficial Occupancy Notice and/or Project Acceptance and Transfer.

APPENDIX F-1
Partial and Complete Subcontract Close-out Form *(Sheet 2 of 2)*

Comments:

SIGNOFFS:		
Name (Print)	**Name (Sign)**	**Date**
End User: *All deliverables have been received, the contract(s) is functionally completes, and is ready for financial and/or charge number closeout. (Required for Section I, II)*		
Project Manager: *Signoff stipulates that all deliverables have been received, the contract(s) is functionally complete, and is ready for financial and/or charge number closeout: (Required for Section I, II)*		
Procurement: *Procurement has been notified that the sub- contract(s) is functionally and technically complete, and has received the list of systems, structures, components, and deliverables associates with the project. (Required for Section II)*		
Receiving/Property Management: *The attached list of equipment, systems, structures & components with a value over $25, 000 of three years or more has been received, tagged, entered into the MARS G database as received, and PEMS database and has been withdrawn from Warehouse/storage. (Required for Section I, II)*		

Distribution:
Accounting, Maintenance, Property Management, User, CTR (for Labor Contractors only), and Project Files

APPENDIX F-2
Final Project Closeout Form (FPCO)

WBS#:	B&R#:	PRN#:	Core Charge #:
PROJECT CHARGE #'s:			

Cancelled Scope/Estimate Only Study Complete Procurement

Attach the "Partial" or "Complete Subcontract Closeout" forms. Financial closeout h as been initiated for this charge number. This charge number will be closed to all charges on _____(Date). All closeout activities must be completed by this time.

SIGNOFFS:		
Name (Print)	**Name (Sign)**	**Date**
Project Engineer: *The subcontractors redline drawings are complete and in accordance with the designed scope of work and included all approved filed charges. Red-lined drawings have been received from the sub-contractor.*		
Project Manager: *All applicable sub-contracts have been accepted as complete, the design and management files have been consolidated into the project files, indexed in accordance with the Project File Index/Records Checklist and a lessons learned letter provided to the Closeout Manager for reference on future similar projects, if applicable.*		
Closeout Project Manager: *Ownership of the attached list of equipment, systems, structures and components have been transferred to the permanent property custodian, and the project files are ready to be archived.*		

Date of Charge Number Closeout:_____

Comments: *(Reference Old Charge Number if appropriate)*

Records Management Manager: *The project files have been received and are acceptable. (Note: Project Closeout Manager is responsible for submitting FPCO to Records Management for signature).*		

Distribution: Accounting, Maintenance, Property Management, User, CTR (for Labor Contractors only), and Project Files

Rev. 8/1/97

Section A. Facility Data

Facility No. _____

Facility Descriptor: _____

Project: _____

Date of Demolition: _____

Additional Information: _____

(Must include information on environmental releases and conditions of site at turnover to Environmental Restoration)

Section B. Final Characterization Data

Reconnaissance Level Characterization Report *(concurrence received)* _____

In-process Characterization _____

Pre-Demolition Survey Report *(approval received)* _____

Post-Demolition Survey Report *(as necessary)*

Section C. Waste Data ***(complete categories as appropriate)***

Sanitary Disposal

Disposal Site: _____

Waste Volume (m^3): _____

Waste Weight (tons): _____

Additional Information: _____

Hazardous Disposal

Disposal Site: _____

Waste Volume (m^3): _____

Additional Information: _____

TSCA Waste Disposal

Disposal Site: _____

Waste Volume (m^3): _____

Additional Information: _____

Asbestos Waste Disposal

Disposal Site: _____

Waste Volume (m^3): _____

Additional Information: _____

Low-Level Waste Disposal

Disposal Site: _____

Waste Volume (m^3): _____

Additional Information: _____

Low-Level Mixed Waste Disposal

Disposal Site: _____

Waste Volume (m^3): _____

Additional Information: _____

Recycled Material

Recycle Facility: _____

Waste Volume (m^3): _____

Additional Information: _____

Property Disposition

Receiver Locations ***(major items only)***: _____

Volume (m^3): _____

Weight (tons): _____

Additional Information:

Section D. Approvals		
Kaiser-Hill Project Manager		
	Name/Signature	Date

Instructions for Completion of Type 1 Facility Closeout Report

General – This Closeout Report is intended to present information in a tabular form and to indicate elements to be attached. Data should be indicated as present and attached or as not required.

Section A. Facility Data – Fill in relevant facility or project information. Include information identifying related projects. Identify anything which might be considered a deviation to decision documents for other projects. Include any actual conditions, which are different from expectations at characterization. Include the OU(s) or ER project(s) the facility is located in or associated. This section SHALL include or reference attachments of environmental releases and documentation of site conditions at turnover to ER, such as foamed/capped tanks or piping left in place, footings, etc.

Section B. Final Characterization Data – The purpose of this section is to collect copies, excerpts or references (if the document(s) is already in the Administrative Record) of relevant characterization data which may be reasonably be expected to be needed in the future.

1. Confirm RLCR is in the administrative record. If it is there, reference. If not, provide a copy.
2. Identify and attach any information from in-process characterization that relates to the characterization of waste or property. This may include surveys of equipment, sampling records, fugitive dust data, RCRA Unit closure data, etc.
3. If a pre-demolition survey was performed prior to demolition of the facility, it should be referenced or attached.
4. Any surveys or characterization performed during decommissioning for use or ER or for follow-on disposition of non-decommissioning media should be attached or referenced.

Section C. Waste Data – The purpose of this section is to identify relevant waste data and cross-reference between the projects and Site waste disposition records.

1. Provide relevant volumes and weights (as necessary) for wastes generated by the project.
2. Provide attached backup information of relevant waste package data to allow future tracking. Data recorded in WEMS should be included as relevant and referenced to the appropriate waste stream.
3. If any waste analysis was performed in addition to the RLCR, such as TCLP sampling and analysis should be included as relevant and referenced to the appropriate waste stream.
4. Property disposition data is intended only for large items (such as trailers); individual items should not be reported.

Section D Approval – After approval, provide a copy to DOE counterpart and place original in the administrative record

APPENDIX G
Glossary and Acronyms

ACROYMNS

AB	Authorization Basis
ACWP	Actual Cost of Work Performed *(Actuals)*
AR	Administrative Record
ARAR	Applicable or Relevant and Appropriate Requirement
ASA	Auditable Safety Analysis
ASF*(ASP)*	Activity Screening Form *(Activity Screening Process)*
BCP	Baseline Change Proposal
BCWP	Budgeted Cost of Work Performed *(Earned Value)*
BCWS	Budgeted Cost of Work Scheduled *(Budget)*
BEST	Basis of Estimate Tool *(Software Program)*
BFO	Basis for Operation
BIO	Basis for Interim Operation
CAA	Clean Air Act
CAB	Citizens Advisory Board
CAD/ROD	Corrective Action Decision/Record of Decision
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHWA	Colorado Hazardous Waste Act
COOP	Conduct of Operations
CPB	Closure Projects Baseline
CPM	Critical Path Method *(schedule)*
CTR	Contractor Technical Representative
CV	Cost Variance *(BCWP-ACWP)*
CWA	Clean Water Act
WBS	Work Breakdown Structure
DBIO	Decommissioning Basis for Interim Operation
DNFSB	Defense Nuclear Facilities Safety Board
DOE/RFFO	Department of Energy/Rocky Flats Field Office
DOP	Decommissioning Operations Plan
DPP	Decommissioning Program Plan
DQO	Data Quality Objective
EAC	Estimate at Completion
EIS	Environmental Impact Statement
ERE	Environmental Readiness Evaluation
ER	Environmental Restoration
EV	Earned Value *(BCWP)*
FFCA	Facility Facilities Compliance Act
FSAR	Final Safety Analysis Report
GSA	Government Services Administration
HASP	Health & Safety Plan
HUD	Housing Urban Development
HVAC	Heating, Ventilation, and Air Conditioning
IGD	Implementation Guidance Document *(for RFCA)*
IHSS	Individual Hazardous Substance Site
IM/IRA	Interim Measure/Interim Remedial Action
ISMS	Integrated Safety Management System
IWCP	Integrated Work Control Program
LCB	Life-Cycle Baseline
LLW	Low Level Waste
LOE	Level of Effort

LRA	Lead Regulatory Agency
MOU	Memorandum of Understanding
NEPA	National Environmental Protection Act
ORR	Operational Readiness Review
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
P&I	Planning and Integration
PAM	Proposed Action Memorandum
PBD	Project Baseline Document
PCS	Project Control System
PMP	Project Management Plan
PM	Project Manager
PMM	Property Management Manual
POD	Plan of the Day
PTS	Progress Tracking System
PU&D	Property Utilization and Disposal
QA/ QC	Quality Assurance/Quality Control
RCM	Radiological Control Manual
RCRA	Resource Conservation and Recovery Act
RDM	Readiness Determination Manual
RFCA	Rocky Flats Cleanup Agreement
RFCP	Rocky Flats Closure Project
RFETS	Rocky Flats Environmental Technology Site
RFLII	Rocky Flats Local Impacts Initiative *(Public Group)*
RLCP/ RLCR	Reconnaissance Level Characterization Plan/Reconnaissance Level Characterization Report
RSOP	RFCA Standard Operating Protocol
RWP	Radiological Work Permit
SAP	Sampling and Analysis Plan
SDRM	Site Documents Requirements Manual
SERM	Site Engineering Requirements Manual
SES/USQD	Safety Evaluation Screen/Unreviewed Safety Question Determination
SME	Subject Matter Expert
SMP	Safety Management Program
SNM	Special Nuclear Material
SOW	Statement of Work
SRA	Support Regulatory Agency
STP	Site Treatment Plan
SV	Schedule Variance *(BCWP-BCWS)*
TRU	Transuranic
WBS	Work Breakdown Structure
WCD	Work Control Document *(used generically for all procedures, instructions, etc.)*
WPD	Work Planning Document *(precursor to the WAD documents intended plan for DOE approval)*
WCF	Work Control Form

TERMS & DEFINITIONS:

Activity. A defined scope of work for designation of controls to maintain an adequate margin of safety against the hazards or other uncertainty presented by the work.

Administrative Controls. Provisions relating to organization and management, procedures, recordkeeping, assessment, and reporting necessary to ensure the safe operation of a facility.

Administrative Request. A request for Administrative support of maintenance, e.g., Standard Work Package, Preventive Maintenance Work Package.

Auditable Safety Analysis (ASA). A defensible safety analysis (similar to a SAR but with much reduced content and requirements) which is developed for a radiological facility. An auditable safety analysis:
Provides systematic identification of hazards within a given DOE operation; and
Describes and analyzes the adequacy of measures taken to eliminate, control or mitigate identified hazards. [DOE-EM-STD-5502-94]

Authorization. The granting of approval to operate a facility or process in accordance with the terms and conditions of a set of authorization controls. Authorization is provided by an regulator and/or legal authority.

Basis. Summary statement of the reason for the administrative and engineered controls, the administrative control program and the associated surveillance requirements. The Basis relates the credited assumptions made in the accident analysis to the requirements for safe operation.

Building Type.
- Type 1 – Building Free of Contamination
- Type 2 – Buildings without significant contamination or hazards, but in need of decontamination
- Type 3 – Buildings with significant contamination and/or hazards

Contact Record. A written documentation of agency conversations resulting in regulatory negotiations and decisions.

Contractor's Technical Representative. In accordance with the K-H Procurement System, CTRs act as the authorized representatives of the Company in performing such functions as approval of drawings, testing, approval of samples, inspection and monitoring of the subcontractor's work, and other functions of a technical nature not involving a change in work, prices, delivery, or terms and conditions of the subcontract. CTRs vary by project and are necessary for all service type requirements.

Cross-Table Review. A documented, critical review performed by peers who are independent of the work being reviewed. Each peer's independence from the work being reviewed means that the peer:
Was not involved as a participant, supervisor, technical reviewer, or advisor in the work being reviewed. Has sufficient freedom from budget and line-management considerations of the development organization to ensure that the work is reviewed impartially.

A Cross-Table Review is an in-depth critique of assumptions or bounding conditions, calculations, alternate interpretations, methodology, and acceptance criteria employed, and of the conclusions drawn in the original work. The goal is to assess the adequacy of the original work, not to redesign it if it is deemed adequate. The Cross-Table Review is a team effort, with the peer review group and the members of the original planning team acting together, rather than submitting comments between groups. This method embraces the opportunity for in-depth discussion of questions and ideas

Data Quality Objectives (DQOs). DQO's are qualitative and quantitative statements derived from the DQO process that clarify technical and quality objectives, define the appropriate type of data, and specify levels of decision error that will be used as the basis for establishing the quality and quantity of data necessary to support facility disposition decisions.

Davis-Bacon. Work that is covered under the provisions of the Davis-Bacon Act, and is considered to be CONSTRUCTION type work and cannot be assigned to contractor or subcontractor's maintenance forces.

Environmental Degradation. Conditions adverse to the safety of the environment that *may* impact personnel and public safety within and outside of RFETS boundaries.

Environmental Regulatory Compliance Facilities, Systems, or Hardware. Any facility, system, or hardware used for containing, monitoring, moving, processing, or analyzing environmentally significant items or events including but not limited to:
- Air monitoring stations.
- Secondary containment of liquids.
- Waste management systems, primary and ancillary.
- Tanks.
- Data monitoring or analysis equipment.
- Significant controlling software.

Facility. Any equipment, structure, system, process, or activity that fulfills a specific purpose. [DOE M 232.1] The definition of facility most often refers to buildings and other structures, their functional systems and equipment, and other fixed systems and equipment installed therein to delineate a facility. However, specific operations and processes independent of buildings or other structures (e.g., waste retrieval and processing, waste burial, remediation, groundwater or soil decontamination, decommissioning) are also encompassed by this definition. [DOE-STD-3009-94] For the purpose of this procedure, the facility designation is expanded to include any formally designated building, site, structure, area, or project (such as Building 371, PADs, Tents, or Ponds) where a formal work authorization must be granted prior to conducting work.

Facility Disposition. The disposition of a facility post-operations and maintenance. It *may* include the following activities: deactivation, decontamination, decommissioning, dismantlement, and demolition. All lead toward environmental remediation/restoration. See Section 1 for definitions of: deactivation, decontamination, decommissioning, dismantlement, and demolition

Graded Approach. A process by which the level of analysis, documentation, and actions necessary to comply with a requirement are commensurate with:

- Relative importance to safety, environment, safeguards, and security
- Magnitude of any hazard involved
- Life-cycle stage of the facility or activity
- Programmatic mission of the facility or activity
- Particular characteristics of the facility or activity
- Other relevant factor, as appropriate
- The Quality Assurance (QA) Rule (10 CFR 830.120) and DOE Order 5700.6C are applied to the Site through the use of a graded approach. In order to ensure the most efficient use of resources, a graded approach is used to determine the rigor with which the QA requirements are applied to a specific facility or activity. This approach provides the flexibility to implement the programs in a way that best suits the facility or activity while maintaining full compliance with the QA Rule and DOE Order 5700.6C.

Hazard. A source of danger (i.e., material, energy source or operation) with the potential to cause illness, injury, or death to personnel or damage to a facility or to the environment (without regard for the likelihood or credibility of accident scenarios or consequence mitigation). [10 CFR 830.3]

Hazard Analysis. The determination of material, system, process, and facility characteristics that can produce undesirable consequences, followed by the assessment of hazardous situations associated with a process or activity. Largely qualitative techniques are used to pinpoint weaknesses in design or operation of the facility that could lead to accidents. [DOE-STD-3009-94] (e.g., JHA, ALARA Review, etc.).

Hazard Categories. The consequences of unmitigated releases of radioactive and/or hazardous material are evaluated and classified by the following nuclear hazard categories:
Hazard Category 1: The hazard analysis shows the potential for significant off-Site consequences.
Hazard Category 2: The hazard analysis shows the potential for significant on-site consequences.
Hazard Category 3: The hazard analysis shows the potential for only significant localized consequences. [DOE 5480.23]

Hazardous Material. Any solid, liquid, or gaseous material that is toxic, explosive, flammable, corrosive, or otherwise physically or biologically threatening to health. Oil is excluded from this definition. [DOE 5480.23] Solid, liquid, or gaseous substances in quantities that either alone, when combined with another substance through a credible mechanism, or when coming in contact with an available energy source, are determined to be capable of posing an unacceptable risk to the environment or to the health and safety of the workers or the public. This includes radiological, non-radiological and mixed materials that are toxic, explosive, flammable, corrosive, or otherwise physically or biologically health threatening.

Health and Safety Plan (HASP). A safety analysis for facilities or operations involving hazardous waste based on the minimum requirements of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response.*

Hold Point. A step in the work package where work is not allowed to proceed until the step is complete and signed, e.g., inspection point, verification point.

Independent/Peer Review. An critical review performed by peers who are independent of the work being reviewed. Otherwise known as a Cross-Table Review.

Integrated Safety Management (ISM). ISM is the systematic integration of safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment. This is to be accomplished through effective integration of environment, safety and health into work planning and execution. In other words, the overall management of safety functions and activities becomes an integral part of mission accomplishment.

Job Hazard Analysis (JHA). A documented process whereby the steps for a work activity are analyzed for hazards and control measures prior to the work being performed.

Non-nuclear Authorization Basis. Those aspects of the conduct of the activity and associated operations relied upon by contractor management to authorize operation. These aspects are considered important to conducting the activity safely. The non-nuclear authorization basis is described in documents such as the Health and Safety Plan (HASP) Auditable Safety Analysis (ASA), Integrated Work Control Program (IWCP), Radiological Work Permit (RWP), or other work control documents depending on the inventories of hazardous materials or hazards estimated to be inherent in the activity.

Notes. A statement that provides important supplemental information. Notes can pertain to action steps. When associated with action steps, the note precedes the step or steps to which it applies. Notes do not contain action steps. . For emphasis, the caution is enclosed in a box and labeled **NOTE.**

Nuclear Activity. See the following definition for Nuclear Facility. Note that definition of Nuclear Facility, as provided by 10 CFR 830.3 includes "*those activities or operations that involve radioactive and/or fissionable materials in such form and quantity that a nuclear hazard potentially exists to the employees or the general public*". [10 CFR 830.3]

Nuclear Facility. This manual applies to nuclear facilities, as generally defined by 10 CFR 830.3. The specific definition of nuclear facilities, as used in the scope of this manual, is limited to Hazard Category 2 and 3 facilities at the Site. When cited in this manual, nuclear facilities means Hazard Category 2 and 3 facilities only. The definition of Hazard Category 2 and 3 is as specified by DOE Order 5480.23 and DOE Technical Standards DOE-STD-1027-92, *Hazard Categorization and Accident Analysis Techniques for Compliance with DOE Order 5480.23, Nuclear Safety Analysis Reports,* and DOE-EM-STD-5502-94, *Hazard Baseline Documentation.* For information, the definition for nonreactor nuclear facility is provided in 10 CFR 830.3:

Nuclear Authorization Basis. Those aspects of the nuclear facility design basis and operational requirements relied upon by DOE to authorize operation. These aspects are considered to important to the safety of the facility operations. The authorization basis is described in documents such as the facility Safety Analysis Report and other safety analyses, hazard classification documents and the Technical Safety Requirements, DOE-issued safety evaluation reports, and facility-specific commitments made in order to comply with DOE rules, Orders, or policies.

Planning Team. The team assigned the responsibility of planning the work for both the Medium and High Planning Levels.

Project Management Plan (PMP). A Project Management Plan (PMP) and Project Management Plan (PMP) are use synonymously throughout this manual. PMPs/PMPs define the project charter, work plan, and requirements implementation. The charter includes the project vision, mission, critical success factors, and performance measures. The work plan includes the Work Breakdown Structure (WBS), responsibility assignment, scope of work, estimated schedule, estimated cost for the project, and project controls. A PMP Template can be found in the K-H Planning and Integration manual of standards, Standard 16.

Project Team. Participants on a project including the Program Manager, Project Manager, Project Engineer, Building/User Representatives, Contractor Representative, appropriate subject matter expert(s), and other personnel assigned to the project.

Public. All individuals outside the DOE Site boundary. [DOE-STD-3009-94]

Quality Assurance Plan. A formal document describing necessary quality assurance, quality control, and other technical activities that are implemented to ensure that the results of the work performed will satisfy the stated performance criteria.

Remediation. Activities conducted to reduce potential risks to people and/or harm to the environment from radioactive and/or hazardous substance contamination.

Responsible Manager (RM). The manager directly responsible and accountable for the development, implementation, and performance of the work (e.g., Facility Manager, Building Manager, Operations Manager, Maintenance Management, and Project Manager)

Responsible Organization. The organization that is assigned by the MM to have the primary or lead responsibility for the resolution of a deficiency or completion of a required action on a Work Request or Administrative Request. The Responsible Organization can be any site organization, including that of the originating RM.

Safety Basis. The combination of information relating to the control of hazards at a facility (including design, engineering analyses, and administrative controls) upon which DOE depends for its conclusion that activities at the facility can be conducted safely. [10 CFR 830.3]

Scope. Statement specifying the performance boundaries of the work activity to be executed. (e.g., remove/install piping, run conduit, install fire control panel etc.)

Scope of Work. Refers to the project or activity baseline that defines technical objectives and general approaches in terms of design, execution, and performance requirements, criteria, and characteristics derived from what the project is intended to accomplish.

Skill-of-the-Worker. Those skills that a journeyman craftsman/technician **Should** be able to perform commensurate with his/her journeyman/skill training without specific task instructions (i.e., instruct craft to install hot water heater element without providing detailed instructions). Skill-of-the-Worker is applicable to WPs, EDPs, TPs and Minor Maintenance.

Slab. The slab is the foundation, footprint, or pad that remains following demolition of the facility or building.

Source Document. Documents or references that support, initiate, or cross-reference the Work Control Form (WCF). These documents *may* include:
(CCCP)
Requirement documents (such as DOE orders, Engineering specifications, or administrative or technical procedures)
Deficiency corrective action documents (such as audits, self-assessments, NCR's, safety concerns, or Occurrence Report actions)

Statement of Work (SOW). Describes the essential and technical requirements for items , materials, or services to be provided.

User Requirement Document (URD). Translates the needs and requirements for the project into a baseline document in which the physical requirements, safety requirements, national codes and standards, Site Engineering Standards, and DOE orders are identified and agreed to by the appropriate parties. These will be the requirements that must be met and complied with and will provide the basis for monitoring and verifying compliance as the work progresses.

Work. Any project or activity that has the potential to produce damage to the environment, injury to the public or worker in the event of an accident or process upset.

Work Authorization Process. The planning and preparation for the conduct of an activity, which result in a documented safety basis and a verifiable ready to proceed status.

Work Control Documents. Those documents that are used directly to perform tasks in preparation for or in the performance of an activity, such as technical procedures, and Engineering Design Packages (EDPs).

Work Control Form (WCF). The form utilized to initiate, process, and assign a Work Request or Administrative Request to the Responsible Organization.